STATE OF NEW HAMPSHIRE DEPARTMENT OF ENVIRONMENTAL SERVICES

AIR RESOURCES DIVISION

CHAPTER Env-A 1200 PREVENTION, ABATEMENT, AND CONTROL OF STATIONARY SOURCE AIR POLLUTION

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Statutory Authority: 125-C: 4, RSA 125-C: 6, II XIV, RSA 125-C: 11, I, RSA 125-C: 12, IV

PART Env-A 1201 INCINERATORS

Env-A 1201.01 Classification of Wastes, Types 1-7, – Defined by the Incinerator Institute of American Standards, Except Type 7.

(a) Type O. Trash consisting of mixture of highly combustible waste such as paper, cardboard cartons, wood boxes, and combustible floor sweepings, from commercial and industrial activities. The mixtures contain up to 10 percent by weight of plastic bags, coated paper, laminated paper, treated corrugated cardboard, oily rags, and plastic or rubber scraps. This type of waste contains 10 percent moisture, 5 percent incombustible solids, and has a heating value of 4718 calories per gram, 8500 BTUs per pound, as fired.

(b) Type 1. Rubbish, consisting of a mixture of combustible waste such as paper, cardboard cartons, wood scrap, foliage and combustible floor sweepings, from domestic, commercial and industrial activities. The mixture contains up to 20 percent by weight of restaurant or cafeteria waste but contains little or no treated papers, plastic or rubber waste. This type of waste contains 25 percent moisture, 10 percent incombustible solids, and has a heating value of 3608 calories per gram, 6500 BTUs per pound, as fired.

(c) Type 2. Refuse, consisting of an approximately even mixture of rubbish and garbage by weight. This type of waste is common to apartment and residential occupancy, consisting of up to 50 percent moisture, 7 percent incombustible solids and has a heating value of 2386 calories per gram, 4300 BTUs per pound, as fired.

(d) Type 3. Garbage, consisting of animal and vegetable wastes from restaurants, cafeterias, hotels, hospitals, markets and like installations. This type of waste contains up to 70 percent moisture, 5 percent incombustible solids, and has a heating value of 1388 calories per gram, 2500 BTUs per pound, as fired.

(e) Type 4. Human and animal remains, consisting of carcasses, organs and solid organic wastes from hospitals, laboratories, abattoirs, animal pounds and similar sources, consisting of up to 85 percent moisture, 5 percent incombustible solids, and having a heating value of 555 calories per gram, 1000 BTUs per pound, as fired.

(f) Type 5. By-product waste, consisting of gaseous, liquid, or semi-liquid, such as tar, paints, solvents, sludge and fumes, from industrial operations. Calorie, BTU, values shall be determined for the individual materials to be destroyed.

(g) Type 6. Solid by-product waste, such as rubber, plastic and wood waste, from industrial operations. Calorie, BTU, values shall be determined for the individual materials to destroyed.

(h) Type 7. Municipal sewage sludge waste, consisting of residue generated from the processing of raw sludge from a treatment plant.

Env-A 1201.02 Classification of Incinerators, Class I-VIII, Defined by the Incinerator Institute of American Standards. Classifications shall be as follows:

(a) Class I - Portable, packaged, completely assembled, direct fed incinerators, having not over 0.142 cubic meters, 5 cubic feet, storage capacity or 11.34 kilograms, 25 pounds, per hour burning capacity and suitable for Type 2 waste.

(b) Class IA - Portable, packaged or job assembled, direct fed incinerators, 0.142 to 0.426 cubic meters, 5 to 15 cubic feet, primary chamber volume; or a burning rate of 11.34 kilograms, 25 pounds, per hour up to, but not including, 34.02 kilograms, 75 pounds, per hour of Type 3 waste.

(c) Class II - Flue-fed, single chamber incinerators with more than 0.186 square meters, 2 square feet, burning area, suitable for Type 2 waste. This type of incinerator is served by one vertical flue functioning both as a chute for charging waste and to carry the products of combustion to the atmosphere.

(d) Class IIA - Chute fed, multiple chamber incinerators with more than 0.186 square meters, 2 square fee, burning area, suitable for Type 1, non-industrial, or Type 2 waste. This type of incinerator is served by a vertical chute for charging wastes from two or more floors above the incinerator and a separate flue for carrying the products of combustion to the atmosphere.

(e) Class III - Direct fed incinerators with a burning rate of 46.40 kilograms, 100 pounds, per hour or over, suitable for Type 0, Type 1 or Type 2 waste.

(f) Class IV - Direct fed incinerators with a burning rate of 34.02 kilograms, 75 pounds, per hour or over, suitable for Type 3 waste.

(g) Class V - Municipal incinerators suitable for Type 0, Type 1, Type 2 or Type 3 wastes or a combination of all four wastes and are rated in kilograms, tons, per hour or kilograms, tons, per 24 hours.

(h) Class VI - Crematory and pathological incinerators Type 4 waste.

(i) Class VII - Incinerators designed for specific by-product wastes, Type 5 or 6.

(j) Class VIII - Municipal sewage sludge incinerators suitable for Type 7 waste.

Env-A 1201.03 Division Approval of New Methods and Incinerator Designs. Env-A 1201 shall not be interpreted as prohibiting the division from approving the construction of any incinerator which shall introduce:

(a) New methods which may improve upon combustion and reduce air pollution.

(b) New design and engineering features which may improve upon combustion and reduce air pollution.

Env-A 1201.04 Visible Emission Standard for Incinerators. There shall not be discharged into the ambient air from any incinerator any air pollutant for a period or periods aggregation more than 3 minutes in any 1 hour which exhibits 20% opacity, No. 1 on the Ringelmann Smoke Chart, or greater as determined with test methods or with opacity monitors approved by the division. Visual opacity shall be determined in accordance with 40 CFR 60, Appendix A, reference method 9, as amended.

Env-A 1201.05 Emmission Standards For Incinerators Constructed, Installed, or Substantially Altered After April 15, 1970.

(a) Incinerators of 90.72 kilograms, 200 pounds, per hour capacity and less shall not emit more than 0.675 grams per dry standard cubic meter, 0.3 grains of particulate matter per standard cubic foot, of dry flue gas, corrected to 12 percent carbon dioxide, without the contribution of carbon dioxide from auxiliary fuel.

(b) Incinerators of over 90.72 kilograms, 200 pounds, per hour capacity but less than 1814.4 kilograms, 4000 pounds, shall not emit more than 0.45 grams per dry standard cubic meter, 0.2 grains of particulate matter per standard cubic foot, of dry flue gas corrected to 12 percent carbon dioxide, without the contribution of carbon dioxide from auxiliary fuel.

(c) After April 30, 1974, new incinerators whose charging rate is 1814.4 kilograms, 4000 pounds, per hour or above, shall not be operated in such a manner as to discharge or cause the discharge into the ambient air of any gases which contain more than 0.18 grams per dry standard cubic meter, 0.08 grains of particulate matter per dry standard cubic foot, corrected to 12 percent carbon

dioxide, maximum 2-hour average.

(d) After April 20, 1974, new sewage sludge incinerators shall not be operated in such a manner as to discharge or cause the discharge into the ambient air of any gases which:

(1) Contain particulate matter in excess of 0.65 g/Kg dry sludge input, 1.30 lb/ton dry sludge input, determined by reference to 40 CFR 60, Subpart O.

(2) Exhibit 20% opacity, No. 1 on the Ringelmann Smoke Chart, or greater.

(3) Where the presence of uncombined water is the only reason for failure to meet the requirements of this part, such failure shall not be a violation of this section.

(e) Incinerators burning hazardous waste shall comply with all the requirements, which are herein incorporated by reference, contained in the EPA Regulations for Owners and Operators of Permitted Hazardous Waste Facilities, 40 CFR 264, Subpart O, including all revisions and amendments through April 1, 1983. The specific paragraphs under Subpart O, Incinerators, with which compliance is required are the following:

(1) 264.340 Applicability;

(2) 264.341 Waste Analysis;

(3) 264.342 Principal Organic Hazardous Constituents;

(4) 264.343 Performance Standards;

(5) 264.344 Hazardous Waste Incinerator Permits;

(6) 264.345 Operating Requirements;

(7) 264.347 Monitoring and Inspections.

Env-A 1201.06 Emission Standards for Incinerators Installed Prior to or On April 15, 1970.

(a) Incinerators having a capacity of 90.72 kilograms, 200 pounds, or less per hour shall not emit more than 0.675 grams per dry standard cubic meter, 0.3 grains of particulate matter per standard cubic foot, of dry flue gas corrected to 12 percent of carbon dioxide, without the contribution of carbon dioxide from

auxiliary fuel.

(b) Incinerators of over 90.72 kilograms, 200 pounds, per hour capacity shall not emit more than 0.45 grams per dry standard cubic meter, 0.2 grains of particulate matter per standard cubic foot, of dry flue gas corrected to 12 percent carbon dioxide, without the contribution of carbon dioxide from auxiliary fuel.

Env-A 1201.07 Emission Standards for Wood Waste Burners. These standards only apply to wood waste burners commonly known as tepees, wigwams, truncated cones and silos which are used only for the purpose of burning wood waste. Wood waste burners constructed, installed, reconstructed, or substantially altered after April 15, 1970 shall conform to the following emission standards:

(a) There shall not be discharged into the ambient air from any wood waste burner any air pollutant for a period or periods aggregating more than 3 minutes in any 1 hour in excess of 40 percent opacity, dark or darker in shade as that designated as No. 2 of the Ringelmann Smoke Chart.

(b) Particulate matter shall not be discharged into the ambient air from any waste burner which exceeds 0.675 grams per dry standard cubic meter, 0.3 grains per standard cubic foot, of dry flue gas corrected to 12 percent carbon dioxide, without contribution of carbon dioxide from an auxiliary fuel.

Env-A 1201.071 Hydrogen Chloride, HCL, Emission Standards for Incinerators.

(a) For installations completed on or after January 1, 1985, emission standards shall be applied to:

(1) Incinerator modules having a design throughput capacity of 4,000 pounds per hour, 48 tons/day, or greater;

(2) Incinerator facilities consisting of multiple modules, having a design throughput of 8,333 pounds per hour, 100 tons/day, or greater;

(3) Incinerators burning Type 5 and 6 waste, regardless of size.

(b) For installations completed prior to January 1, 1986, emission standards shall be applied to:

(1) Incinerator modules having a design throughput capacity of 4,000 pounds per hour, 48 tons/day, or greater;

(2) Incinerator facilities consisting of multiple modules, having a design throughput of 12,500 pounds per hour, 150 tons/day, or greater.

(c) HCL emission standards, based on a 3-run stack test using a method approved by the division are:

(1) Average emission level of 50 ppm dv at 7% O_2 , or;

(2) 90% HCL removal efficiency, whichever is less stringent.

(d) Exempted from the emission standards are:

(1) Incinerators burning municipal sludge, Type 7 refuse;

(2) Hazardous waste incinerators, subject to Env-A 1201.05 (e).

(e) Incinerators installed prior to January 1, 1986, shall be allowed a reasonable time period by which to come into compliance with the emission standard. The time period shall be determined on a case-by-case basis, but shall not exceed a period of 3 years.

Env-A 1201.08 Name Plate and Instruction Posting Requirements.

(a) The manufacture's name plate shall be installed in a conspicuous place on the incinerator, giving model number, rated capacity, and the types of waste for which the device is designed.

(b) Detailed instructions for the operation of each incinerator shall be posted in a conspicuous place near the device.

Env-A 1201.09 Trained and Competent Operator Required. The owner is responsible for having an operator, trained and competent in the operation of the incinerator, in charge of the stationary source.

Env-A 1201.10 Exemptions. Municipal wood waste burners are exempt from other provisions of Env-A 1201 provided that they comply with the provision established for incinerators as specified in Env-A 1201.04 and Env-A 1201.06 above.

Env-A 1201.11 Permit Requirements.

Incinerators operated in the state may be required to have permits as established by the Statewide Permit System in Env-A 600 and may be required to pay the permit fees as established by the Permit Fee System in Env-A 700.

Part Env-A 1202 FUEL BURNING DEVICES

Env-A 1202.01 Visible Emission Standard For Fuel Burning Devices Installed on or Prior to May 13, 1970. No person shall cause or allow visible emissions from fuel

burning devices installed on or prior to May 13, 1970 in excess of 40 percent opacity, darker in shade or appearances than that designated as No. 2 on the Ringelmann Smoke Chart.

Env-A 1202.02 Visible Emission Standard for Fuel Burning Devices Installed After May 13, 1970. No person shall cause or allow visible emissions from fuel burning devices installed after May 13, 1970 in excess of 20 percent opacity, darker in shade or appearance than that designed as No. 1 on the Ringelmann Smoke Chart.

Env-A 1202.03 Replacement of Fuel Burning Devices. When it becomes necessary to replace fuel burning devices installed on or prior to May 13, 1970, the owner or operator shall be required to operate within the limits established in Env-A 1202.02.

Env-A 1202.04 Exemption from Visible Emission Standards.

(a) The provisions of Env-A 1202.01 and Env-A 1202.02 above shall not apply to emissions during the building of a new fire, cleaning of fires, or soot blowing, the shade or appearance of which may be in excess or 40 percent opacity, No. 2 on the Ringelmann Smoke Chart, for a period or periods aggregating no more than 6 minutes in any 60 minutes. Those devices equipped with automatic soot blowers shall be permitted to be in excess of 40 percent opacity, for a period not to exceed 60 minutes in any 8-hour period.

(b) For fuel burning devices installed after May 13, 1970 with gross heat input equal to or greater than 250 million BTU/Hr., visible emissions shall not exceed 20 percent opacity, No. 1 on the Ringelmann Smoke Chart, except for 2 minutes in any one hour emissions may be as great as 40 percent opacity, No. 2 on the Ringelmann Smoke Chart.

Env-A 1202.05 Particulate Emission Standards for Fuel Burning Devices Installed on or Prior to May 13, 1970. No person shall cause or allow emissions of particulate matter from fuel burning devices installed on or prior to May 13, 1970 in excess of the rate set forth in the following equations:

(a) Devices with gross heat input less than 10×10^6 BTU/Hr.,

$$E = 0.60;$$

(b) Devices with gross heat input equal to or greater than 10
10×10^6 but less than $10{,}000 \times 10^6$ BTU/Hr.,

$$E = 0.880\ I^{-0.166}\ ;\ \text{or}$$

(c) Devices with gross heat input equal to or greater than $10{,}000 \times 10^6$ BTU/Hr.,

$E = 0.19$.

Where: E = Maximum Allowable Particulate Emission in $lb/10^6$ BTU

I = Maximum Gross Heat Input in 10^6 BTU/Hr.

These equations are shown graphically in Env-A 1202.08.

Env-A 1202.06 Particulate Emission Standards for Fuel Burning Devices Installed After May 13, 1970 But Before January 1, 1985. No person shall cause or allow emissions of particulate matter from fuel burning devices installed after May 13, 1970 but before January 1, 1985 in excess of the rates set forth in the following equation :

(a) Devices with gross heat input less than 10×10^6 BTU/Hr.

$E = 0.60$;

(b) Devices with gross heat input equal to or greater than 10×10^6 but less than 250×10^6 BTU/Hr.

$E = 1.028\ I^{-0.234}$; or

(c) Devices with gross heat input equal to or greater than 250×10^6 BTU/Hr.,

$E = 0.10$.

where: E = Maximum Allowable Particulate Emission in $lb/10^6$ BTU

I = Maximum Gross Heat Input in 10^6 BTU/Hr.

These equations are shown graphically in Env-A 1202.08.

Env-A 1202.07 Particulate Emission Standards for Fuel Burning Devices Installed on or After January 1, 1985. No person shall cause or allow emissions of particulate matter from fuel burning devices installed on or after January 1, 1985, in excess of the rates set forth in the following equations:

(a) Devices with gross heat input less than 100×10^6 BTU/Hr. ,

$E = 0.30$;

(b) Devices with gross heat input equal to or greater than 100×10^6 but less than 250×10^6 BTU/Hr.,

$E = 0.15$; or

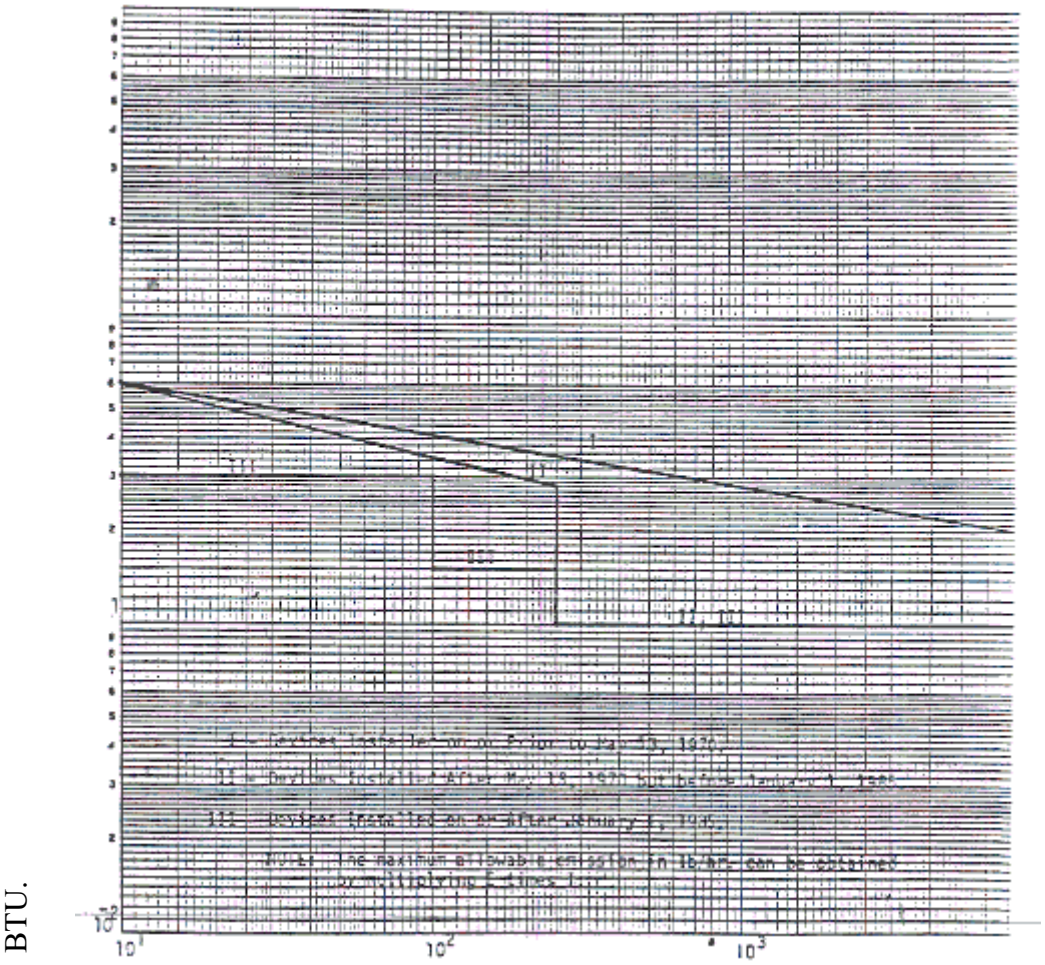
(c) Devices with gross heat input equal to or greater than 250×10^6 BTU/Hr.

$E = 0.10$.

Where: E = Maximum Allowable Particulate Matter Emission in $lbs/10^6$ BTU

These equations are shown graphically in Env-A 1202.08.

Env-A 1202.08 Graph.



Note : Text in the above graph reads as follows:

I - Devices Installed on or Prior to May 13, 1970.

II - Devices Installed After May 13, 1970 but before January 1, 1985.

III - Devices Installed on or After January 1, 1985.

Note : The maximum allowable emissions in lb/hr. can be obtained by multiplying E times I.

Env-A 1202.09 Particulate Emissions from Common and Multiple Stacks.

(a) When two or more fuel burning devices are connected to a common stack, the combined gross heat input of all devices connected to the stack shall be used to determine the allowable particulate emission from the stack. If a fuel burning device installed on or after January 1, 1985 is connected to a common stack which includes emissions from one or more existing fuel burning devices, the combination of devices connected to the stack shall be treated as a device installed on or after January 1,1985 for the purposes of determining the allowable particulate emission from the stack.

(b) When one fuel burning device is connected to two or more stacks, the allowable particulate emission shall not exceed that allowable for the same device connected to one stack.

Env-A 1202.10 Continuous Emission Monitoring Systems. When the division requires the installation and operation of a continuous emission monitoring system on a fuel burning device, the system must be approved by the division prior to installation.

Env-A 1202.11 Permit Requirements. Fuel burning devices operated in the state may be required to have a permit as established by the Statewide Permit System in Env-A 600 and may be required to the pay the permit fees as established in Env-A 700.

PART Env-A 1203 PROCESS, MANUFACTURING AND SERVICE INDUSTRIES

Env-A 1203.01 Industries Defined.

(a) "Process and manufacturing industries" means all sources engaged in the manufacture of goods and supplies, both finished and intermediate in nature whose operations involve emissions to the ambient air from process or manufacturing equipment or machinery directly or through stacks and exhaust and ventilating systems. Process and manufacturing industries include, but are not necessarily limited to, the following types of sources which are not specifically covered by other parts:

(1) Chemical process industries;

(2) Food and agricultural industries;

(3) Metallurgical industries;

(4) Mineral products industries;

(5) Pulp and paper industries;

(6) Petroleum refining and petrochemical operations; and

(7) Wood processing operations and industries.

(b) "Service industries" means all stationary sources engaged in supplying services, whose operations involve emissions to the ambient air from various equipment and apparatus, directly or through stacks and exhaust and ventilating systems. Examples of service establishments include, but are not necessarily limted to the following:

(1) Dry cleaning establishments;

(2) Printing establishments;

(3) Commercial wholesale and retail establishments;

(4) Hospitals, schools and other institutional establishments; and

(5) Hotels, restaurants, theaters, sports arenas and similar establishments.

Env-A 1203.02 Particulate Matter Emission Standards. No person shall cause or allow the emission of particulate matter and fumes from any process, manufacturing or service industry into the ambient air in excess of the following amounts:

(a) All process, manufacturing or service industries shall comply with the requirements of Env-A 1203.

(b) If the process, manufacturing or service industry is emitting particulate matter which, because of its toxicity is further regulated by an effect factor from Env-A 1203.10, the required emissions as established by Table I are further reduced by the effects factor. When 2 or more elements or compounds are emitted from the same stack, the more stringent effects factor shall govern.

Env-A 1203.03 Gaseous Emission Standards.

(a) No person shall cause or allow the emission of gases from any process or manufacturing or service industry into the ambient air in excess of those quantities which are compatible with the achievement of ambient air quality standards for sulfur dioxide, nitrogen oxides, hydrocarbons, ozone and lead as specified in Env-A 300 and for other gases to be specified in future parts.

(b) The control of volatile organic compounds shall be accomplished to achieve the ozone, O_3 , standard.

Env-A 1203.04 Acid Mists Emission Standards. No person shall cause or allow the emission of acid mists from stationary industrial, commercial or residential sources in excess of those specified on Env-A 1203.11.

Env-A 1203.05 Visible Emission Standard. Except during periods of start-ups and warm-ups, no person shall cause or allow the fugitive or stack emission of air pollutants in excess of 20 percent opacity, No. 1 on the Ringelmann Smoke Chart, excluding water vapor for any process, manufacturing and service industry subject by definition unless otherwise controlled by other effective parts.

Env-A 1203.06 Compliance Schedules. Owners or operators of existing stationary sources unable to comply with the preceding sections shall submit to the division, prior to December 31, 1972, a compliance schedule delineating the progressive steps required to bring these sources into compliance with this part, on or before December 31, 1973. Owners or operators of existing sources unable to comply with Env-A 1203.05 shall submit to the division, prior to October 31, 1979, a compliance schedule delineating the progressive steps required to bring these stationary sources into compliance with this part on or before October 31, 1980.

Env-A 1203.07 Exemptions. Those process, manufacturing and fuel burning devices, or other sources of gaseous and particulate matter covered specifically by other parts shall be controlled by those parts or sections as applicable.

Env-A 1203.08 Permits Required.

(a) Devices within process, manufacturing, and service industries operated in the state may be required to have permits as established by the Statewide Permit System in Env-A 600 and may be required to the pay the permit fees as established by the Permit Fee System in Env-A 700.

Env-A 1203.09 Table No. 1.

TABLE 1

Process Weight Rate (lbs/hr.)	Devices Installed After Feb 18, 1972 Emission Rate (lbs/hr.)	Devices Installed Prior to or on Feb. 18, 1972 Emission Rate (lbs/Hr.)
50	0.36	0.43
100	0.55	0.68
500	1.53	1.99
1,000	2.58	3.17
5,000	7.58	9.35

10,000	12.0	14.85
20,000	19.2	23.62
60,000	40.0	49.31
80,000	42.5	51.03
120,000	46.3	55.55
160,000	49.0	58.88
200,000	51.2	61.53
1,000,000	69.0	82.75
2,000,000	77.6	93.11

Interpolation of the data in Table 1 for the process weight rates up to 60,000 lbs/hr. shall be accomplished by the use of the equations:

$E = 4.10\ p^{0.67}$ p less than or equal to 30 tons/hr. – Devices Installed After Feb. 18, 1972.

$E = 5.05\ p^{0.67}$ p less than or equal to 30 tons/hr. – Devices Installed Prior to or on Feb. 18, 1972.

Interpolation and extrapolation of the data for process weight rates in excess or 60,000 lbs/hr. shall be accomplished by use of the equations:

$E = 55.0\ p^{0.11} - 40$ p greater than 30 tons/hr. – Devices Installed After Feb. 18, 1972.

$E = 66.0\ p^{0.11} - 48$ P greater than 30 tons/hr. – Devices Installed Prior to or on Feb. 18, 1972.

where :

E = Emissions in pounds per hour
P = Process Weight Rate in tons per hour

Table 2
EFFECTS FACTOR FOR PARTICULATE MATTER

MATERIAL		
A. All material not specifically listed here		1.0
B. Elements and their compounds of the basic elements		
(CAS Numbers)		
(7440-36-0)	Antimony	0.9
(7440-38-2)	Arsenic	0.9
(7440-39-3)	Barium	0.9
(7440-43-9)	Cadmium	0.2
(7440-47-3)	Chromium	0.2
(7440-48-4)	Cobalt	0.9
(7440-50-8)	Copper	0.2
(7440-58-6)	Hafnium	0.9
(7439-92-1)	Lead - Lead arsenate	0.3
(7580-67-8)	Lithium hydride	0.04
(7723-14-0)	Phosphorus	0.2
(7782-49-2)	Selenium	0.2
(7740-22-4)	Silver	0.1
(13494-80-9)	Tellurium	0.2
(7440-28-0)	Thallium	0.2
(7440-61-1)	Uranium (soluble)	0.1
(7440-61-1)	Uranium (insoluble)	0.4
(7440-62-2)	Vanadium	0.2
(1314-13-2)	Zinc Oxide	0.8

(1314-22-3)		
(7440-41-7)	Beryllium	Not more than 10 grams of beryllium over a 24-hour period. The operator may elect to meet the ambient air concentration of 0.01 ug/m^3 averaged over a 30-day period and measured in the vicinity of the source.
(7439-97-6)	Mercury	Not more than 2300 grams per 24-hour period. The provisions of this subpart are applicable to those stationary sources which process mercury ore or recover mercury and to those which use mercury cathode cells to produce chlorine gas and alkali metal hydroxide.
C. Mineral material and miscellaneous substances		
(CAS Numbers)		
(7631-86-9)	Silica (crystalline)	0.4
(1332-21-4)	Asbestos	As specified by the EPA in Vol 38, #66, Federal Register, Friday, April 6, 1973.

Env-A 1203.11 Table No. 3.

Table 3
LIMITATION OF EMISSIONS OF ACID MISTS

(Allowable Stack Gas Concentrations in Milligrams Per Dry Cubic Meter at Standard Conditions)

Sulfuric, CAS 7664-93-9, Acid Mist (except as provided in note 1 below)	35
Nitric Acid, CAS 7697-37-2, Mist and/or Vapor (except as provided in note 2 below)	70
Hydrochloric Acid, CAS 7647-01-0, Mist and/or Vapor	210
Phosphoric Acid, CAS 7664-38-2, Mist and/or Vapor	3

Note 1 On or after February 18, 1972 no owner or operator of a sulfuric acid production unit shall discharge or cause the discharge into the ambient air

of sulfur dioxide, CAS 7446-09-50, in excess of 2 kg. per metric ton, 4 lbs. per ton, of acid produced maximum 2-hour average.

Note 2 On or after February 18, 1972 no owner or operator of a nitric acid production unit shall discharge or cause to be discharged into the ambient air nitrogen oxides which are in excess of 1.5 kg. per metric ton, 3 lbs. per ton, of acid produced maximum 2-hour average expressed at NO_2 or 10 percent opacity or greater.

PART Env-A 1204 STATIONARY SOURCES OF VOLATILE ORGANIC COMPOUNDS (VOCs)

Env-A 1204.01 Purpose. The purpose of this part is to describe provisions regarding the implementation of reasonably available control technology on certain VOC-emitting sources located in New Hampshire. This is required by the division in order to comply with its nonattainment plan pursuant to sections 172(c)(1) and 182(b)(2) of the Act.

Env-A 1204.02 General Applicability.

(a) This part shall apply to designated processes and devices in the following source categories which have the potential to emit certain amounts of non-exempt VOC compounds:

(1) Can coating;

(2) Paper, fabric, film, or foil substrate coating;

(3) Vinyl or urethane substrate coating;

(4) Metal furniture coating;

(5) Magnetic wire insulation coating;

(6) Metal coil coating;

(7) Miscellaneous metal parts and products coating;

(8) Plastic parts coating;

(9) Wood furniture, burial caskets, and gunstock coating;

(10) Rotogravure and flexographic printing;

(11) Offset lithographic printing;

(12) Fixed-roof storage tanks;

(13) External floating roof tanks;

(14) Bulk gasoline loading terminals;

(15) Bulk gasoline plants;

(16) Petroleum refineries;

(17) Cutback and emulsified asphalt plants;

(18) Solvent metal cleaning;

(19) Miscellaneous stationary VOC sources; and

(20) Multicategory stationary VOC sources.

(b) The section within this part pertaining to each source category listed above shall define the specific applicability of each category of sources and provide such applicable sources with the requirements of this program.

(c) Sources with coating, printing, or miscellaneous devices or processes that meet or exceed the relevant RACT applicability criteria in the applicable section within this part, or that are unclassifiable, shall be exempt from the provisions of the applicable compliance section in this part provided that all of the following conditions are met:

(1) The combined theoretical potential VOC emissions from all process operations do not exceed the relevant RACT applicability threshold for any consecutive 12-month period by enforceable permit;

(2) The source has been and remains in full compliance with the conditions of the permit since the date of issuance or the terms of any consent decree entered into by the division or by EPA, or pursuant to any court order;

(3) The actual VOC emissions of the source, or from all operations associated with the applicable VOC category have not exceeded the RACT applicability threshold specified in the applicable paragraph in any calendar year since December 31, 1988, except as specified in (g), below;

(4) The enforceable permit shall contain testing provisions as necessary to demonstrate compliance with permit restrictions, pursuant to Env-A 800;

(5) The enforceable permit shall contain recordkeeping and reporting provisions as necessary to demonstrate compliance with the permit restrictions, pursuant to Env-A 901.04 and Env-A 901.05, respectively;

and

(6) The source has submitted the compliance plan required by this part.

(d) Minor core activities of non-exempt VOCs at a stationary source, as defined in Env-A 1204.03, having total aggregate emissions of not more than 5 tons per year, combined for all classifiable and unclassifiable processes and/or devices, shall be excluded from the provisions of this part.

(e) Testing and research activities, as defined in Env-A 1204.03, performed at coating, printing, or miscellaneous sources shall be excluded from the provisions of this part provided that the combined non-exempt VOC emissions from such activities do not exceed 5 tons per calendar year.

(f) Once a stationary source becomes subject to the appropriate section requirements of this part, the source shall remain subject to those requirements even if its emissions later fall below the relevant RACT applicability threshold, except as provided in (g), below.

(g) Any stationary coating, printing, miscellaneous or multicategory source which has reduced its actual VOC emissions below the RACT applicability threshold prior to May 31, 1995, shall be eligible for exemption from the provision of (f), above, provided that both of the following conditions are met:

(1) The owner or operator can demonstrate that the actual VOC emissions occurring in the consecutive 12-month period after said reduction was implemented are no more than 80% of the relevant RACT applicability threshold; and

(2) The owner or operator accepts an enforceable permit containing restrictions which limit the combined actual VOC emissions, during any 12-month period, from the source, or all process operations associated with a specific classifiable process, below the specified percentage of the RACT applicability threshold.

Env-A 1204.03 Definitions. For the purposes of this part the following definitions shall apply:

(a) "Actual VOC emissions" means the total non-exempt VOCs actually emitted by a source, process or device in a specified time period.

(b) "Actual VOC emission rate" means the mass of non-exempt VOCs actually emitted by a source, process or device per unit throughput, where said throughput is usually stated in terms of either solvent usage or other quantifiable production variable.

(c) "Add-on controls" means equipment or techniques, such as incineration,

which is used to collect, remove, and/or destroy organic vapors from a gas stream before the vapors are released into the ambient air.

(d) “Asphalt” means a dark-brown to black cementitious solid, semisolid, or liquid, which is predominately comprised of various mixtures of hydrocarbons, including bitumens, crude petroleum or tars, which occur naturally or which are obtained as residues from refining petroleum.

(e) “Bubble” means a technique of aggregating certain emissions so as to impose controls that are more stringent than RACT-level on certain emitting units at a particular source, while simultaneously imposing controls that are less stringent than RACT-level on other emitting units, including the option of no controls on such units.

(f) “Bulk gasoline plant” means a gasoline storage and distribution facility with a daily throughput of less than 76,000 liters (20,000 gallons) which receives gasoline from bulk terminals by trailer transport, which gasoline is stored in tanks and subsequently dispensed via account trucks to local farms, businesses and service stations.

(g) “Bulk gasoline terminal” means a gasoline storage facility which:

(1) Receives gasoline from refineries primarily by pipeline, ship, or barge;

(2) Delivers gasoline to bulk gasoline plants, to commercial or retail accounts within or outside New Hampshire, primarily by tank truck; and

(3) Has a daily throughput of 76,000 liters (20,000 gallons) or more of gasoline based on any consecutive 30-day period during the ozone season.

(h) “Capture and control system” means a system to capture and convey VOC emissions released from VOC-emitting devices to add-on control equipment that destroys, recovers, or otherwise removes VOC, to permanently reduce the emission of VOC to the air.

(i) “Capture efficiency (CE)” means the weight per unit time of VOC entering a capture system and delivered to add-on control equipment divided by the weight per unit time of total VOC emitted by an emission source of VOC, expressed as a percentage.

(j) “Classifiable process or device” means any process or device covered under one of the VOC categories listed in Env-A 1204.02 .

(k) “Clear coat” means a coating which lacks color and opacity or is transparent, and uses the surface to which it is applied as a reflectant base or undertone color;

(l) “Coating” means a protective, decorative or functional film applied in a thin layer to a surface or impregnated into a substrate. This term includes but is not

limited to paints, varnishes, sealants, adhesives, inks, maskants, and temporary protective coatings such as lacquers or enamels and films applied to paper, plastics or foil.

(m) “Coating line” means a series of one or more apparatus or operations which include a coating applicator, any associated drying area, flash-off area and/or oven wherein a surface coating is applied, dried and/or cured.

(n) “Cold cleaning" means the batch process of degreasing metal surfaces by spraying, brushing, flushing or immersion in a cold VOL solvent. Wipe cleaning is not included in this definition.

(o) “Cold VOL solvent” means a VOL solvent maintained below its boiling point during use in solvent metal cleaning.

(p) “Condensate” means any VOL, separated from the gas or vapor phase, that condenses due to charges in temperature and/or pressure and remains liquid at standard conditions.

(q) “Compliant coating” means a coating material that meets the applicable VOC RACT emission rate standard in Env-A 1204.09 through Env-A 1204.17.

(r) “Conventional air spray” mean a spray coating method in which the coating is atomized by mixing it with compressed air at an air pressure greater than 10 pounds per square inch gauge at the point of atomization.

(s) "Conveyorized degreasing" mean the continuous process of cleaning and removing soils and/or grease from metal surfaces by operating a conveyor system with either cold or vaporized VOL solvents.

(t) “Core activities” means operations which are central to the manufacturing and/or business of the source. Core activities exclude all non-core activities listed in (ba), below.

(u) “Crude oil” means a naturally occurring mixture that:

(1) Consists of hydrocarbons and/or sulfur, nitrogen, and/or oxygen derivatives of hydrocarbons; and

(2) Is liquid at standard conditions.

(v) “Cutback asphalt” means asphalt cement which has been liquefied by blending with petroleum solvents, which solvents evaporate upon exposure to atmospheric conditions leaving the asphalt cement to perform its function.

(w) “Designated processes and devices” means processes and devices:

(1) That are covered under a classifiable category; and

(2) For which there are specified emission rate limits or control techniques.

(x) “Emulsified asphalt” means an emulsion of asphalt cement and water which contains a small amount of an emulsifying agent, forming a heterogeneous, or normally immiscible, system in which the water forms the continuous phase of the emulsion, and minute globules of asphalt form the discontinuous phase.

(y) “Equivalent substitute control technique” means a substitute control technique that results in VOC emission reductions or, for an associated test method, a level of accuracy equal to or greater than that achieved by the specified control technique(s) for the applicable VOC category.

(z) “Exempt Volatile Organic Compound (Exempt VOC)” means any VOC excluded or proposed to be exclude by EPA from its list of compounds exempt or proposed to be exempt from its definition of VOCs on the basis of negligible photochemical reactivity, including and limited to the following:

(1) Methane (CAS 74-82-8);

(2) Ethane (CAS 74-84-0);

(3) 1, 1, 1-Trichloroethane (CAS 71-55- 6) ;

(4) Methylene Chloride (CAS 75-09-2);

(5) Trichlorofluoromethane (CAS 75-69-4);

(6) Dichlorodifluoromethane (CAS 75-1- 8);

(7) Chlorodifluoromethane (CAS 75-45-6);

(8) Trifluoromethane (CAS 75-46-7);

(9) Trichlorotrifluoroethane (CAS 76-13-1);

(10) Dichlorotetrafluoroethane (CAS 76-14-2);

(11) Chloropentafluoroethane (CAS 76-15-3);

(12) Dichlorotrifluoroethane (CAS 306-83-2);

(13) Tetrafluoroethane (CAS 811-97-2);

(14) Dichlorofluoroethane (CAS 1717-00-6);

(15) Chlorodifluoroethane (CAS 75-68-3);

(16) Chlorotetrafluoroethane (CAS 2837-89-0);

(17) Pentafluoroethane (CAS 354-33-6);

(18) Tetrafluoroethane (CAS 359-35-3);

(19) Trifluoroethane (CAS 420-46-2);

(20) Difluoroethane (CAS 75-37-6);

(21) Parachlorobenzotrifluoride (PCBTF) (CAS 98-56-6);

(22) Perchloroethylene (perc) (CAS 127-18-4);

(23) Acetone;

(24) All classes of volatile methyl siloxanes which are listed in Federal Register, Vol. 59, No. 192, Table 1, p. 50694, dated October 5, 1994; and

(25) The following 4 classes of Perfluorocarbon compounds only:

a. Cyclic, branched, or linear, completely fluorinated alkane;

b. Cyclic, branched; or linear, completely fluorinated ethers with no unsaturation;

c. Cyclic, branched, or linear, completely fluorinated tertiary amines with no unsaturation; and

d. Sulfur-containing perfluorocarbons with no unsaturations and with sulfur bonds only to carbon and fluorine.

(aa) "External floating roof" means a storage vessel cover in an open top tank consisting of a double deck or pontoon single deck which rests upon and is supported by the VOL being contained and is equipped with a closure seal to close the space between the roof edge and tank shell.

(ab) "Fabric coating" means the coating of a textile substrate including, but not limited to, application by impregnation or saturation by the use of a knife, roll or rotogravure coater to impart properties that are not initially present, such as strength, stability, water or acid repellency, or appearance.

(ac) "Federally-enforceable document" means:

(1) A federally-approved division rule as defined in 40 CFR 51;

(2) A permit, license, or order issued by the division pursuant to a federally-approved regulation;

(3) A permit or order issued by the EPA; or

(4) A regulation promulgated by EPA and codified under 40 CFR 60 or 40 CFR 61.

(ad) "Flexographic printing" means the application of ink in the form of characters, designs and/or pictures to a substrate by means of a roll printing technique in which the pattern to be applied is raised above the printing roll and the image carrier is made of rubber or other elastomeric materials.

(ae) "Gasoline" means any petroleum distillate or petroleum distillate alcohol blend having a Reid vapor pressure of 27.6 kPa (4 pounds per square inch) or greater that is used as a fuel for internal combustion engines.

(af) "Gunstock coating" means the surface coating of wooden components of firearms, which components are exposed to the environment and subject to functional handling by the end user.

(ag) "High solids coatings" means coatings with solids content of 70% or more by weight.

(ah) "Hot VOL solvent" means a VOL solvent maintained above its boiling point during use in solvent metal cleaning.

(ai) "Knife coating" means the application of a coating material to a substrate by means of drawing the substrate beneath a knife or other type of blade that spreads the coating evenly over the entire width of the substrate.

(aj) "Lease custody transfer" means the transfer of produced crude oil or condensate, after processing and/or treating in the producing operations, from storage tanks or automatic transfer facilities to pipelines or any other forms of transportation.

(ak) "Limited at all times" means that the VOC emissions from a source or device, as measured or calculated in accordance with the applicable method(s) and associated averaging times prescribed in Env-A 803, does not exceed the specified emission rate limit for the subject VOC category or subcategory during the RACT-applicable life of said source or device.

(al) "Lithography" means a planar printing process where the image and non-image areas are chemically differentiated; the image area is oil receptive and the non-image area is typically water receptive.

(am) "Low solvent coating" means coatings which contain less organic solvent than the conventional coatings used by the industry. Low solvent coatings include water-borne, higher solids, electrodeposition and powder coatings.

(an) "Low-VOC emitting process" means a process that results in VOC emission

rate reductions equivalent to a RACT level add-on control system.

(ao) “Magnetic wire insulation coating" means a coating in which an electrically insulated varnish or enamel is applied onto the surface of wire for use in electrical machinery.

(ap) “Maximum design conditions” means either:

(1) Operational conditions that are based on the design capacity or maximum production capacity of the source; or

(2) The maximum capacity of a stationary source to emit non-exempt VOCs under its physical or operational design which conditions include, for coating and graphics arts sources, those coatings or inks with the highest annual average non-exempt VOC content in actual use by such sources during either:

a. The 2 calendar years immediately prior to the effective date of this rule; or

b. A period of 24 consecutive selected calendar months approved by the director.

(aq) “Metal coil coating” means the surface coating of any continuous metal strip with thickness of 0.15 mm (0.006 in.) or more that is packaged in a roll or in helical form.

(ar) “Metal degreasing” means the removal of grease and/or grease-bearing soils from metal surfaces using liquid or vapor means.

(as) “Metal furniture coating” means the surface coating of any furniture made of metal or any metal part which will be assembled with other metal, wood, fabric, plastic or glass parts to form a furniture piece.

(at) “Minor core activity” means any core activity at a stationary source for which the aggregate non-exempt actual VOC emissions from all processes and devices associated with said activity do not exceed either of the following:

(1) The RACT applicability emissions threshold for any category in Env-A 1204.09 through Env-A 1204.17; or

(2) A total of 5 tons per year.

(au) “Miscellaneous metal parts coating” means the coating of any metal substrate except for the following products:

(1) Automobiles and light-duty trucks, including automobile refinishing and customized top coating;

(2) Metal cans;

(3) Flat metal sheets and strips in the form of rolls or coils;

(4) Magnet wire for use in electrical machinery;

(5) Metal furniture;

(6) Exterior portions of airplanes;

(7) Exterior portions of marine vessels.

(av) "Miscellaneous stationary VOC source" means any stationary source of VOCs which has at least one unclassifiable core process or device but which may also include any number of classifiable core processes or devices.

(aw) "Modified control techniques" means techniques for reducing VOC emissions to the atmosphere that are less stringent than the control techniques prescribed in the applicable section of this part.

(ax) "Modified emission rate limits" means VOC RACT emission rate limits that are less stringent than the limits on actual emission rates prescribed in the applicable section of this part.

(ay) "Multicategory stationary VOC source" means any stationary source of VOCs which, excluding non-core activities as enumerated in (ba), below, has either:

(1) At least 2 classifiable processes or devices in dissimilar VOC categories; or

(2) At least 1 classifiable processes or devices and at least 1 unclassifiable processes or devices.

(az) "Non-compliant coating" means a coating material that exceeds the applicable VOC RACT emission rate standard in Env-A 1204.09 through Env-A 1204.17.

(ba) "Non-core activities" means activities conducted at the source that are not directly related to the central manufacturing and/or business purpose of the source, including but not limited to:

(1) Use of office machines, including copying and duplication activities;

(2) Interior maintenance activities and the devices and supplies used therein, such as:

a. Janitorial and general building maintenance;

b. Welding, gluing, and soldering related to building and machine maintenance; and

c. Painting and cleaning process devices, except:

1. VOL metal degreasing operations subject to regulation under this part; or

2. Any process equipment cleaning or maintenance activity subject to regulation under this part;

(3) Exterior maintenance activities and the equipment and supplies used therein, such as repainting, roofing, and blasting, and general grounds maintenance, including lawncare; and.

(4) Non-commercial maintenance and operation of non-commercial laboratory and other activities to the extent that such activities are not directly related to the primary production process or commercial business activities normally conducted at the source.

(bb) "Non-exempt VOC" means any VOC which is not an exempt VOC, as listed in (z), above.

(bc) "Offset" means a printing process that transfers the ink film to an intermediary surface, which in turn transfers the ink film to a printing substrate.

(bd) "Open-top vapor metal degreasing process" means the batch process for degreasing metal surfaces by condensing hot VOL solvent vapor onto colder metal parts.

(be) "Paper coating" means:

(1) Coating of paper or pressure sensitive tape, regardless of substrate material, by means of:

a. Direct surface application; or

b. Impregnation or saturation by the use of roll, knife or rotogravure coating;

(2) Related web coating processes on plastic film; or

(3) Decorative coatings on metal foil.

(bf) "Petroleum refinery" means any facility engaged in producing gasoline, kerosene, distillate fuel oils, residual fuel oils, lubricants or other products through distillation, cracking, extraction, or reforming of unfinished petroleum derivatives.

(bg) “Plastic part coating” means the surface coating of a component of an end-use product, which component is made from a substance that has been formed from resin through the application of pressure and/or heat.

(bh) “Prime coat” means the first of 2 or more films of coating applied to a substrate.

(bi) “RACT applicability criterion” means the design, operational, or other characteristics of a source, process or device which define the conditions at which said source, process or device becomes RACT applicable.

(bj) “RACT applicability threshold” means the theoretical potential emissions of non-exempt VOCs at which a coating, printing, miscellaneous or multicategory source, process or device becomes RACT applicable.

(bk) “RACT applicable classifiable process or device” means any classifiable process or device meeting the applicability provisions of the relevant VOC category in Env-A 1204.09 through Env-A 1204.27.

(bl) “RACT applicable miscellaneous stationary VOC source” means any miscellaneous stationary VOC source meeting the applicability criteria of Env-A 1204.27(a).

(bm) “RACT applicable multicategory stationary VOC source” means any multicategory stationary VOC source meeting the applicability criteria of Env-A 1204.27(a).

(bn) “Refinishing” means the repainting of used equipment.

(bo) “Roll coating” means the application of a coating material to a substrate by means of hard rubber, elastomeric, or metal rolls.

(bp) “Rotogravure coating” means the application of a coating material to a substrate by means of a roll coating technique in which the pattern to be applied is etched on the coating roll. The coating material is picked up in these recessed areas and is transferred to the substrate.

(bq) “Rotogravure printing” means the application of ink in the form of characters, designs and/or pictures to a substrate by means of a roll printing technique that involves an intaglio or a recessed image area in the form of cells.

(br) “Solvent metal cleaning” means the process of degreasing metal using cold cleaning, open top vapor or conveyorized degreasing methods.

(bs) “Specialty coating” means a coating used for products required to meet non-standard performance specifications. These include adhesion primers, resist coatings, soft coatings, reflective coatings, electrostatic prep coatings, headlamp lens coating, ink pad printing coatings, stencil coatings, vacuum metalizing

coatings, and gloss reducers.

(bt) “Specified control technique” means the control technique(s) specified in the applicable section of this part for a particular RACT applicable, classifiable VOC source, process or device.

(bu) “Specified emission standard” means the emission standard specified in the applicable section of this part for a particular RACT applicable, classifiable VOC source, process or device.

(bv) “Submerged fill” means a tank truck loading process whereby the gasoline or petroleum product is loaded from a nozzle submerged at or near the bottom of the liquid column.

(bw) “Substitute control technique” means a technique proposed by a facility that differs from the specified control technique for controlling VOC emission for the applicable VOC category and which may include VOC emission control equipment, technology, operational and maintenance procedures and/or testing procedures.

(bx) “Testing and research activities” means activities that are:

(1) Conducted for the purpose of:

a. Determining product quality and/or customer acceptance;

b. Improving product quality; or

c. Improving an existing process;

(2) Not conducted for the direct manufacture of products for commercial sale; and

(3) Conducted at the same site as the source’s core activities.

(by) “Theoretical potential VOC emissions (TPEs)” means the theoretical emissions of non-exempt VOCs that:

(1) Would occur prior to the application of add-on controls that are required by a federally enforceable regulation or document issued prior to January 1, 1990; and

(2) Are based on one of the followling:

a. Continuous operation of 8760 hours per year under maximum design conditions, as defined in this section;

b. Hours of operation that are limited by permit conditions, under

maximum design conditions for the stationary source; or

c. Hours of operation and/or design and/or process conditions, including operating rates, that are limited by permit conditions.

(bz) "Topcoat" means the final film or series of films of coating applied to a substrate in an operation consisting of two or more coats.

(ca) "Touch-up and repair" means the application of finishing materials to cover minor imperfections.

(cb) "Unclassifiable process or device" means a VOC-emitting process or device which does not meet the definitional criteria of at least one of the categories in Env-A 1204.02(a)(1) through (a)(18).

(cc) "Vinyl or urethane substrate coating" means applying a decorative, protective or functional coating or ink on vinyl or urethane substrates, including vinyl or urethane coated fabric.

(cd) "VOC category" means any process, device or operation listed in Env-A 1204.02(a)(1) through (a)(18), irrespective of whether such processes, devices or operations meet the applicability criteria of Env-A 1204.09 through Env-A 1204.26.

(ce) "VOC-emitting device" means any equipment, building, or activity that results in the emission of VOCs, either through a duct or stack or as fugitive emissions.

(cf) "VOC subcategory" means any process, device or operation subordinate to one of the categories listed in Env-A 1204.02(a)(1) through (a)(18,), above, for which a VOC RACT standard has been prescribed in the applicable category in Env-A 1204.09 through Env-A 1204.26.

(cg) "Volatile organic liquid (VOL)" means any organic liquid which is capable of emitting non-exempt VOC compounds into the atmosphere.

(ch) "Wood furniture coating operation" means the surface coating of products that belong to the same wood furniture industrial grouping which grouping includes the following standard industrial classification (SIC) codes: 2434, 2511, 2512, 2517, 2519, 2521, 2531, 254l, and 2599.

Env-A 1204.04 Determination of Emissions.

(a) The determination of TPEs shall include all emissions from core activities, as defined in Env-A 1204.03.

(b) The determination of actual emissions for the purpose of determining compliance with the applicable rule or establishing exceptions to applicability, as

provided in Env-A 1204.02, shall be as prescribed in Env-A 621.

(c) For coating sources that use add-on control equipment or a bubble to achieve compliance, the emission rate limit shall be determined on a solids basis, as specified in (d), below, using the following terms:

(1) “S” mean the VOC emission rate limit in terms of lb/gal (kg/l) of coating solids;

(2) “d_A” means the actual mass density of the applied surface coating formulation in terms of lb/gal (kg/l); and

(3) "E_c" means the emission rate limit prescribed for the applicable coating category, subcategory or process as calculated on a coatings basis, in terms of lb VOC/gal (kg/l) of coating, as applied to the substrate.

(d) To calculate the emission rate limit S, subtract the quotient of E_c and d_A from one and divide the result into E_c , as in the formula below:

$$S = E_c / (1 - E_c / d_A)$$

(e) Sources using a bubble approach to comply with the provisions of this part shall employ the procedure specified in Env-A 613.

Env-A 1204.05 RACT Order Application and Issuance Procedures.

(a) For the purpose of this section, the following definitions shall apply:

(1) “Determination of insufficiency” means a written determination by the division that the documentation submitted by a source applicant, pursuant to the requirement for a feasibility study of RACT options as required by (b) and (c), below, is inadequate for the division to issue a RACT order.

(2) "Determination of sufficiency” means a written determination by the division that the documentation submitted by a source applicant, pursuant to the requirement for a feasibilit study of RACT options as required by (b) and (c), below, is adequate for the division to issue a RACT order.

(b) The following persons shall comply with the applicable provisions of (c), below, and obtain a RACT order from the division in accordance with the provisions of (d), (e) or (f), below, whichever paragraphs are applicable:

(1) Owners or operators of classifiable and RACT-applicable stationary sources seeking modified VOC RACT emission limits or control technology; and

(2) Owners or operators of RACT-applicable miscellaneous or multicategory stationary VOC sources seeking RACT compliance by

adopting control option 5 of Env-A 1204.27(c).

(c) The owner or operator or any stationary source meeting the criteria of either (b)(1) or (b)(2), above, shall submit the following to the division within 120 days of the effective date of this part:

(1) An inventory of all VOC-emitting devices and processes at the stationary source not exempt under the applicable provisions of Env-A 1204.02 or Env-A 1204.09 through Env-A 1204.27;

(2) The theoretical potential emissions of each VOC-emitting device or process identified pursuant to (c)(1), above;

(3) The estimated actual amount of non-exempt VOCs emitted, based on solvent throughput or units of production, from each VOC-emitting device or process at the stationary source not exempt under the applicable provisions of Env-A 1204.02 or Env-A 1204.09 through Env-A 1204.27, for the following time periods:

a. Daily average for calendar year 1990, or other year or consecutive 12-month period approved by the director in accordance with (e), below; and

b. Daily average during the ozone season for calendar year 1990, or other calendar year approved by the director in accordance with (e), below;

(4) A study of RACT control options study consisting of the following:

a. A detailed examination of the technical and economical feasibility of available VOC control techniques for all VOC-emitting devices or processes not exempt under the applicable provisions of Env-A 1204.02 or Env-A 1204.09 through Env-A 1204.27; and

b. The control option selected, stating emission limits, monitoring, recordkeeping and reporting procedures, and test methods to be used to demonstrate compliance;

(5) The amount of non-exempt VOC that is proposed to be controlled from each VOC-emitting device or process identified in (c)(1), above; and

(6) A schedule for implementation, containing the elements described in Env-A 1204.28(b)(2) and a demonstration of compliance consistent with the requirements of this part.

(d) For any source submitting a RACT order application pursuant to the applicable provision(s) of (b), above, the division shall:

(1) Issue to the source owner or operator within 60 days of receipt of documentation submitted pursuant to (c), above, an initial determination of sufficiency; or

(2) Issue to the source owner or operator within 60 days of receipt of documentation submitted pursuant to (c), above an initial determination of insufficiency, together with a request for all additional information necessary to issue a RACT determination for a modified emission rate limit, modified control technique, or an equivalent substitute control technique, as applicable.

(e) The director shall approve an alternative time period pursuant to (c)(3)a. or (c)(3)b., above, for which the source provides a demonstration that the applicable time periods specified therein are unrepresentative of the operation of the facility due to one or more of the following reasons:

(1) Add-on controls were installed during the calendar year 1990, or during the 1990 ozone season, as applicable that resulted in non-exempt VOC emission rate reductions of 40% or more of the average emission rate during the applicable time period immediately preceding the specified time period;

(2) Process or product changes were implemented during the calendar year 1990, or during the 1990 ozone season, as applicable, that resulted in non-exempt VOC emission rate reductions of 40% or more of the average emission rate during the applicable time period immediately preceding the specified time period; or

(3) The facility was not in existence or the applicable VOC-emitting processes or devices were not operational during any portion of calendar year 1990, or during any portion of the 1990 ozone season, as applicable; or

(4) The facility provides other adequate demonstration that the 1990 calendar year, or the 1990 ozone season, whichever is applicable, was unrepresentative of VOC-emitting facility operations.

(f) In the event that an initial determination of sufficiency is made, the division shall issue a final determination of sufficiency and present to EPA and the owner or operator of the affected source a proposed RACT order within 60 days of the initial determination of sufficiency containing:

(1) An inventory of all affected VOC-emitting devices or processes not exempt under the applicable provisions of Env-A 1204.02 or Env-A 1204.09 through Env-A 1204.27;

(2) Emission limits for all affected VOC-emitting devices or processes not exempt under the applicable provisions of Env-A 1201.02 or Env-A

1204.09 through Env-A 1204.27;

(3) A schedule requiring compliance with the RACT emission limits than contains the elements described in Env-A 1204.28(b)(2);

(4) Procedures for determining initial compliance with the approved modified emission rate limits or control technology;

(5) Procedures for assessing continuous compliance with the emission limits, if applicable; and

(6) Recordkeeping and reporting requirements in accordance with the provisions of Env-A 901.04 and Env-A 901.05, respectively.

(g) In the event that an initial determination of insufficiency is made, the division shall:

(1) Issue a final determination of sufficiency and present to EPA and the owner or operator of the affected source a proposed RACT order containing those items listed in (f)(1) through (f)(6), above, within 60 days of the receipt of those items submitted pursuant to (d)(2), above; or

(2) Terminate the permit process and issue a final determination of insufficiency if a complete response to the initial determination of insufficiency is not received from the owner or operator of the affected facility within 60 days of receipt of notification of the division's initial determination of insufficiency.

(h) within 30 days of the issuance of a proposed RACT order, the division shall issue a public notice of any oral hearing on a proposed RACT order, once in a newspaper of daily statewide circulation and once in a newspaper in the general locality of the affected source.

(i) The division shall conduct an oral hearing on the proposed RACT order not less than 30 day after the issuance of the public notice.

(j) The division shall issue a final RACT order to the owner or operator of the affected facility within 60 days of the date of the public hearing on the proposed RACT order.

(k) The division shall submit to EPA a revision to the state implementation plan (SIP) within 60 days of the issuance of a final RACT order.

Env-A 1204.06 Equivalent Substitute Control Techniques.

(a) The director shall approve all control techniques which are different from those specified in the applicable sections of this part, provided that the substitute control technique proposed shall result in a reduction of VOC emissions or

emission rates equal to or greater than the reduction resulting from the control techniques required by the sections in this part. The determination as to whether the proposed substitute control technique is equivalent to the applicable specified technique shall be verified by test methods or other procedures approved by the director in accordance with (b), below.

(b) For any method of emission control or testing or equipment operation or maintenance procedure that is proposed by a VOC source as a substitute for a specified control technique and that requires approval by the director, the following procedure shall apply:

(1) The VOC source seeking approval of the substitute control technique shall submit to the director technical data and information demonstrating that:

a. The purpose of the specified control technique will be achieved by the substitute control technique; and

b. The compliance verification procedures for the substitute control technique produce results that are no less precise and accurate than those produced by the compliance verification procedures for the specified control technique.

(2) The director shall review the submitted information and shall approve or reject the proposed substitute control technique within 60 days of receipt of the complete application. Upon approval by the director, the substitute control technique shall be designated as an equivalent substitute control technique.

Env-A 1204.07 Emissions Monitoring Requirements. All sources subject to this part shall comply with the applicable testing requirements as listed for each source category pursuant to Env-A 803. When compliance with the applicable emission standards is achieved by using a capture and control system, a CE test shall be performed according to the procedures in Env-A 804.

Env-A 1204.08 Recordkeeping and Reporting Requirements. All sources subject to this part shall comply with the applicable recordkeeping and reporting requirements as specified for each source category in Env-A 901.

Env-A 1204.09 Applicability Criteria and Compliance Standards for coating of Metal Cans.

(a) All sources whose metal can coating operations have combined TPEs during any consecutive 12-month period after December 31, 1989 which equal or exceed 10 tons of non-exempt VOCs shall be subject to the provisions of this section.

(b) For the purpose of this section, the following definitions shall apply:

(1) “End sealing compound” means a synthetic rubber compound which is coated onto metal can ends and which functions as a gasket when the end is assembled on the can.

(2) “Exterior base coating” means a coating applied to the exterior of the body of a two-piece can to provide exterior protection to the metal or to provide background for the lithographic or printing operation.

(3) “Interior base coating” means a coating applied by roller coater or spray to the metal sheets for three-piece cans to provide a protective lining between the can metal and product.

(4) “Interior body spray” means a coating sprayed on the interior of the metal can body to provide a protective film between the product and the can.

(5) “Over-varnish” means a coating applied directly over a design coating or direct over ink to reduce the coefficient of friction, to provide gloss and to protect the finish against abrasion and corrosion.

(6) “Side seam spray” means a coating applied to the seam of a three-piece can.

(7) “Three-piece can” means a metal can that is made by rolling a rectangular sheet of metal into a cylinder that is welded, cemented or soldered at the seam and attaching 2 ends.

(8) “Two-piece can” means a metal can whose body and one end are formed from a shallow cup and to which the other end is later attached.

(9) “Two-piece can exterior and coating” means a coating applied by roller coating or spraying to the exterior end of a metal can to provide protection to the metal.

(c) Metal can coating sources shall be limited at all times to the emission rates specified below:

(1) For use in interior or exterior sheet base-coating or over-varnish, or a two-piece can exterior basecoat or over-varnish, 0.34 kg/l (2.8 lb VOC/gallon) of coating as applied, excluding water an exempt compounds or, for sources implementing add-on controls or a bubble to achieve compliance, the solids-based emission rate determined by the procedure described in Env-A 1204.04(c);

(2) For use in a two-piece or three-piece can interior body spray coating, or a two-piece can exterior end spray or roll coating, 0.51 kg/l (4.2 lb VOC/gallon) of coating, as applied, excluding water and exempt compounds;

(3) For use in three-piece can side-seam spray operations; 0.66 kg/l (5.5 lb VOC/gallon) of coating, as applied, excluding water and exempt compounds; or

(4) For use in end sealing compound operations, 0.44 kg/l (3.7 lb VOC/gallon) of coating, as applied excluding water and exempt compounds.

(d) As an alternative to the applicable emission rate limit(s) specified in (c), above, metal can coating operations meeting the applicability criteria of this section may satisfy the requirements of this section either by:

(1) Implementing add-on control techniques or a bubble and complying with the solids-based emission rate limits calculated using the procedures of Env-A 1204.04(c); or

(2) Meeting either a coatings-based or solids-based modified emission rate limit as approved by the director and EPA in accordance with the RACT order provisions of this part in the event that the source owner or operator demonstrates that the specified emission rate limits in (c) or (d)(1), above, cannot be met because of technological and/or economic reasons.

Env-A 1204.10 Applicability Criteria and Compliance Standards for Coating of Paper, Fabric, Film and Foil Substrates.

(a) All sources whose paper, fabric, film and foil coating operations, including specialty printing, have combined TPEs during any consecutive 12-month period after December 31, 1989 which equal or exceed 10 tons of non-exempt VOCs shall be subject to the provisions of this section.

(b) Those processes applying a coating to vinyl or urethane coated fabric, or vinyl or urethane sheets shall be excluded from the provisions of this section.

(c) Those processes applying a coating to any woven or non-woven, fibrous or non-fibrous substrate, including paper, fabric, glass matting, plastic film, ribbon, and magnetic tapes shall be limited at all times to an emission rate of 0.35 kg/l (2.9 lb VOC/gallon) of coating, as applied, excluding water and exempt compounds.

(d) As an alternative to the applicable emission rate limit specified in (c), above, paper, fabric, film and foil substrate coating operations meeting the applicability criteria of this section may satisfy the requirements of this section either by:

(1) Implementing add-on control techniques or a bubble and complying with the solids-based emission rate limit calculated using the procedures of Env-A 1204.04(c); or

(2) Meeting either a coatings-based or solids-based modified emission rate

limit as approved by the director and EPA in accordance with the RACT order provisions of this part in the event that the source owner or operator demonstrates that the specified emission rate limit in (c) or (d)(1), above, cannot be met because of technological and/or economic reasons.

Env-A 1204.11 Applicability Criteria and Compliance Standards for Vinyl and Urethane Substrate Coating.

(a) All sources whose vinyl or urethane substrate coating operations have combined TPEs during any consecutive 12-month period after December 31, 1989 which equal or exceed 10 tons of non-exempt VOCs shall be subject to the provisions of this section.

(b) Those processes applying a coating onto vinyl or urethane coated fabric, or vinyl or urethane sheets shall be limited at all times to an emission rate or 0.45 kg/l (3.8 lb VOC/gallon) of coating, as applied, excluding water and exempt compounds.

(c) As an alternative to the applicable emission rate limit specified in (b), above, vinyl or urethane substrate coating operations meeting the applicability criteria of this section may satisfy the requirements of this section either by:

(1) Implementing add-on control techniques or a bubble and complying with the solids-based emission rate limit calculated using the procedures of Env-A 1204.04(c); or

(2) Meeting either a coatings-based or solids-based modified emission rate limit as approved by the director and EPA in accordance with the RACT order provisions of this part in the event that the source owner or operator demonstrates that the specified emission rate limit in (b) or (c)(1), above, cannot be met because of technological and/or economic reasons.

Env-A 1204.12 Applicability Criteria and Compliance Standards for Metal Furniture Coating.

(a) All sources whose metal furniture coating operations have combined TPEs during any consecutive 12-month period after December 31, 1989 which equal or exceed 10 tons of non-exempt VOCs shall be subject to the provisions of this section. This section shall apply to the emissions from application area(s), flash-off area(s), and oven(s) of metal furniture coating lines involved in prime and topcoat or single coating operations.

(b) For the purpose of this section, the following definitions shall apply:

(1) “Application area” means the area within a facility where the coating is applied by spraying, dipping or flowcoating techniques.

(2) “Flash-off area” means the space between the coating application area

and the oven.

(c) Those processes applying a coating onto metal furniture or parts of metal furniture, including but not limited to tables, benches, chairs, file cabinets, and waste baskets, shall be limited at all times to an emission rate of 0.36 kg/l (3.0 lb VOC/gallon) of coating, as applied, excluding water and exempt compounds.

(d) As an alternative to the applicable emission rate limit specified in (c), above, metal furniture coating operations meeting the applicability criteria of this section may satisfy the requirements of this section either by:

(1) Implementing add-on control techniques or a bubble and complying with the solids-based emission rate limit calculated using the procedures of Env-A 1204.04(c); or

(2) Meeting either a coatings-based or solids-based modified emission rate limit as approved by the director and EPA in accordance with the RACT order provisions of this part in the event that the source owner or operator demonstrates that the specified emission rate limit in (c) or (d)(1), above, cannot be met because of technological and/or economic reasons.

Env-A 1204.13 Applicability Criteria and Compliance Standards for Magnetic Wire Insulation Coating.

(a) All sources whose magnetic wire insulation coating operations have combined TPEs during any consecutive 12-rnonth period after December 31, 1989 which equal or exceed 10 tons of non-exempt VOCs shall be subject to the provisions of this section.

(b) Those processes applying a coating of electrically insulating varnish or enamel onto copper or aluminum wire or foil shall be limited at all times to an emission rate of 0.20 kg/l (1.7 lb VOC/gallon) of coating, as applied, excluding water and exempt compounds.

(c) As an alternative to the applicable emission rate limit specified in (b), above, magnetic wire insulation coating operations meeting the applicability criteria of this section may satisfy the requirements of this section either by:

(1) Implementing add-on control techniques or a bubble and complying with the solids-based emission rate limit calculated using the procedures of Env-A 1204.04(c); or

(2) Meeting either a coatings-based or solids-based modified emission rate limit as approved by the director and EPA in accordance with the RACT order provisions of this part in the event that the source owner or operator demonstrates that the specified emission rate limit in (b) or (c)(1), above, cannot be met because of technological and/or economic reasons.

Env-A 1204.14 Applicability Criteria and Compliance Standards for Coating of Metal Coils.

(a) All sources whose metal coil coating operations have combined TPEs during any consecutive 12-month period after December 31, 1989 which equal or exceed 10 tons of non-exempt VOCs shall be subject to the provisions of this section.

(b) For the purpose of this section, the following definitions shall apply:

(1) “Coil coating line” means a web coating line where coating is applied to metal coil.

(2) "Coil coating unit" means a coating application station and its associated flashoff area, drying area, and/or drying oven wherein coating is applied and dried or cured on a coil coating line.

(c) Those processes applying a coating onto a metal coil substrate shall be limited at all times to an emission rate of 0.31 kg/l (2.6 lb VOC/gallon) of coating, as applied, excluding water and exempt compounds.

(d) As an alternative to the applicable emission rate limit specified in (c), above, metal coil coating operations meeting the applicability criteria of this section may satisfy the requirements of this section either by:

(1) Implementing add-on control techniques or a bubble and complying with the solids-based emission rate limit calculated using the procedures of Env-A 1204.04(c); or

(2) Meeting either a coatings-based or solids-based modified emission rate limit as approved by the director and EPA in accordance with the RACT order provisions of this part in the event that the source owner or operator demonstrates that the specified emission rate limit in (c) or (d)(1), above, cannot be met because of technological and/or economic reasons.

Env-A 1204.15 Applicability Criteria and Compliance Standards for Coating of Miscellaneous Metal Parts and Products.

(a) All sources whose miscellaneous metal parts and products coating operations have combined TPEs during any consecutive 12-month period after December 31, 1989 which equal or exceed 10 tons of non-exempt VOCs shall be subject to the provisions of this section.

(b) For the purpose of this section, the following definitions shall apply:

(1) “Air dried coating” means coatings which are dried by the use of air or forced warm air at temperatures up to 90°C (194°F);

(2) “Coating application system” means all operations and equipment

which applies, conveys, and dries a coating, including, but not limited to, spray booths, flow coaters, flash-off areas, air dryers and ovens;

(3) “Exposure to extreme environmental conditions” means constant exposure to weather, or exposure to any of the following conditions: ambient temperatures frequently above 95°C (203°F), detergent, abrasive and scouring agents, solvents, corrosive atmospheres, or similar environmental conditions*;*

(4) “Extreme performance coatings” means coatings designed for exposure to extreme environmental conditions.

(5) “Heat sensitive material” means materials which cannot consistently be expose to temperatures greater than 95°C (203°F); and

(6) “Single coat” means one film of coating applied to a metal surface.

(c) Those processes applying a protective, decorative or functional coating onto metal parts and products such as tractors, fans, pumps, meters, doors, frames and shelves shall be limited at all times to the emission rates specified below:

(1) For a coating that is a clear or transparent top coat, 0.52 kg/l (4.3 lb. VOC/gallon) of coating, as applied, excluding water and exempt compounds;

(2) For a coating that is air dried, 0.42 kg/l (3.5 lb. VOC/gallon) of coating, as applied, excluding water and exempt compounds;

(3) For a coating that is use in extreme environmental conditions, 0.42 kg/l (3.5 lb. VOC/gallon) of coating, as applied, excluding water and exempt compounds; and

(4) For all other coatings, 0.36 kg/l (3.0 lb. VOC/gallon) of coating, as applied, excluding water and exempt compounds.

(d) If more than one emission limitation stipulated in (c), above, applies to a specific coating, then the least stringent emission limitation shall apply.

(e) All non-exempt VOC emissions from solvent washing shall be considered in the emission limitations unless the solvent is directed into containers that prevent evaporation into the atmosphere.

(f) As an alternative to the applicable emission rate limit(s) specified in (c) as qualified by (d) and (e), above, miscellaneous metal parts coating operations meeting the applicability criteria of this section may satisfy the requirements of this section either by:

(1) Implementing add-on control techniques or a bubble and complying

with the solids-based emission rate limit(s) calculated using the procedures of Env-A 1204.04(c); or

(2) Meeting either (a) coatings-based or solids-based modified emission rate limit(s) as approved by the director and EPA in accordance with the RACT order provisions of this part in the event that the source owner or operator demonstrates that the specified emission rate limit(s) in (c) or (f)(1), above, cannot be met because of technological and/or economic reasons.

Env-A 1204.16 Applicability Criteria and Compliance Standards for Plastic Parts Coating.

(a) All sources whose plastic parts coating operations have combined TPEs during any consecutive 12-month period after December 31, 1989, equal or exceed 50 tons of non-exempt VOCs shall be subject to the provisions of this section.

(b) For the purpose of this section, the following definitions shall apply:

(1) “Adhesion promoter” mean a coating applied to a plastic substrate to facilitate the adhesion of subsequent coatings.

(2) “Automotive” means that which pertains to roadway vehicles with enclosed driver/passenger compartments, including automobiles, trucks, buses, vans, and limousines.

(3) “Business machines” means a device that uses electronic or mechanical methods to process information, perform calculations, print or copy information, or convert sound into electrical impulses for transmission, including any product classified under the standard industrial classification codes pursuant to the definition given in 40 CFR 60.721(a).

(4) “Color coat" means a coating which is pigmented and the purpose of which is to impart a desired color to a product.

(5) “Electromagnetic interference (EMI) shielding coatings” means a coating used in plastic business machine housing to attenuate electromagnetic signals that would otherwise pass through the plastic housing.

(6) “Electrostatic prep coating” means a coating that is applied to a plastic part solely to provide conductivity for the subsequent application of a prime coat, a topcoat, or other coating through the use of electrostatic application methods. Such coating is clearly identified as an electrostatic prep coat on its accompanying material safety data sheet.

(7) “Flexible coating” means a coating with the ability to withstand dimensional changes resulting from mechanical or thermal distortion of its substrate.

(8) “Gloss reducers” means a low gloss coating formulated to eliminate glare for safety purposes on interior surfaces of a vehicle, as specified under the U.S. Department of Transportation Motor Vehicle Safety Standards.

(9) “High bake coating” means a coating design to cure at temperatures above 194°F (90°C) .

(10) “Low bake coating” means a coating designed to cure at temperatures no higher than 194°F (90°C).

(11) “Non-flexible coating” means a coating without the ability to withstand dimensional changes and designed for substrates that remain rigid during normal use.

(12) “Primer” or “prime coating” means the first of 2 or more films of coating applied to a surface.

(13) “Radio frequency interference (RFI) shielding coatings” means a coating used in plastic business machine housing to attenuate radio frequency signals that would otherwise pass through the plastic housing.

(14) “Reflexive argent coating" means a silver-colored coating that will reflect light.

(15) “Resist coating” means a coating that is applied to a plastic part prior to metallic plating to prevent deposits of metal from forming on said part.

(16) “Soft coating” means any coating that provides a soft tactile feel similar to leather and a rich leather-like appearance when applied to plastic interior automotive parts and exterior business machine parts.

(17) “Stencil coating” means a coating that is applied over a stencil to a plastic part at a thickness of not more than 1 mil. of coating solids, generally forming letters, numbers or decorative designs.

(18) “Texture coating” means a coating that is applied to a plastic part which, in its finished form, consists of discrete raised spots of the coating.

(19) “Vacuum metallizing” means a process whereby metal is vaporized and deposited on a substrate in a vacuum chamber.

(20) “Vacuum metallizing coating” means a topcoat or basecoat that is used in the vacuum metalizing process.

(c) Those processes applying a non-specialty protective, decorative or functional coating onto plastic components of automotive interiors shall be limited at all times to the emission rates specified below:

(1) For high bake prime coatings, 0.46 kg VOC/l (3.8 lb VOC/gallon) of coating, as applied, excluding water and exempt compounds;

(2) For high bake color coatings, 0.49 kg VOC/l (4.1 lb VOC/gallon) of coating, as applied, excluding water and exempt compounds;

(3) For low bake prime coatings, 0.42 kg VOC/l (3.5 lb VOC/gallon) of coating, as applied, excluding water and exempt compounds; and

(4) For low bake color coatings, 0.38 kg VOC/l (3.2 lb VOC/gallon) of coating, as applied, excluding water and exempt compounds.

(d) Those processes applying a non-specialty protective, decorative or functional coating onto plastic components of automotive exteriors shall be limited at all times to the VOC RACT emission rates specified below:

(1) For high bake flexible prime coatings, 0.60 kg VOC/l (5.0 lb VOC/gallon) of coating, as applied, excluding water and exempt compounds;

(2) For high bake nonflexible prime coatings, 0.54 kg VOC/l (4.5 lb VOC/gallon) of coating, as excluding water and exempt compounds;

(3) For high bake color coatings, 0.55 kg VOC/l (4.6 lb VOC/gallon) of coating, as applied, excluding water and exempt compounds;

(4) For high bake clear coatings, 0.52 kg VOC/l (4.3 lb VOC/gallon) of coating, as applied, excluding water and exempt compounds;

(5) For low bake prime coatings, 0.66 kg VOC/l (5.5 lb VOC/gallon) of coating, as applied, excluding water and exempt compounds;

(6) For red or black low bake color coatings, 0.67 kg VOC/l (5.6 lb VOC/gallon) of coating, as applied, excluding water and exempt compounds;

(7) For low bake color coatings, except for red or black colors, 0.61 kg VOC/l (5.1 lb VOC/gallon) of coating, as applied, excluding water and exempt compounds; and

(8) For low bake clear coatings, 0.54 kg VOC/l (4.5 lb VOC/gallon) of coating, as applied, excluding water and exempt compounds.

(e) The following processes applying specialty coatings onto plastic automotive

components shall be limited at all times to the VOC RACT emission rates specified below, per specialty coating class:

(1) For black or reflective argent coatings, soft specialty coatings, air bag cover coatings, vacuum metalizing basecoats and texture coatings, 0.66 kg VOC/l (5.5 lb VOC/gallon) of coating, as applied, excluding water and exempt compounds;

(2) For gloss reducers, vacuum metalizing topcoats and texture topcoats, 0.77 kg VOC/l (6.4 lb VOC/gallon) of coating, as applied, excluding water and exempt compounds;

(3) For stencil coatings, adhesion primers, ink pad printing coatings, electrostatic prep coats and resist coatings, 0.82 kg VOC/l (6.8 lb VOC/gallon) of coating, as applied, excluding water and exempt compounds; and

(4) For coating of headlamp lenses, 0.89 kg VOC/l (7.4 lb VOC/gallon) of coating, as applied, excluding water and exempt compounds.

(f) Those processes applying a nonspecialty protective, decorative or functional coating onto plastic substrates, except for automotive plastic components, shall be limited at all times to the VOC RACT emission rates specified below:

(1) For prime coatings, 0.14 kg VOC/l (1.2 lb VOC/gallon) of coating, as applied; excluding water and exempt compounds;

(2) For nontexture color coatings, 0.28 kg VOC/l (2.3 lb VOC/gallon) of coating, as applied, excluding water and exempt compounds;

(3) For texture color coatings, 0.28 kg VOC/l (2.3 lb VOC/gallon) of coating, as applied, excluding water and exempt compounds; and

(4) For electromagnetic interference (EMI) and radio frequency interference (RFI) shielding, 0.48 kg VOC/l (4.0 lb VOC/gallon) of coating, as applied, excluding water and exempt compounds.

(g) Those processes applying a specialty protective, decorative or functional coating onto plastic substrates, except for automotive plastic components, shall be limited at all times to the emission rates specified below, per specialty class:

(1) For soft coatings, 0.52 kg VOC/l (4.3 lb VOC/gallon) of coating, as applied, excluding water and exempt compounds;

(2) For plating resist, 0.71 kg VOC/l (5.9 lb VOC/gallon) of coating, as applied, excluding water and exempt compounds; and

(3) For plating sensitizer, 0.85 kg VOC/l (7.1 lb VOC/gallon) of coating,

as applied, excluding water and exempt compounds.

(h) If more than one emission limitation stipulated in (c) through (g), above, applies to a specific coating, then the least stringent emission limitation shall apply.

(i) For all plastic parts coating operations except touch-up and repair activities, one of the following control techniques shall be used:

(1) High volume-low pressure (HVLP) spray;

(2) Electrostatic spray;

(3) Zinc-arc spray:

(4) Air-assisted airless spray;

(5) Airless spray;

(6) Flow coating techniques; or

(7) An equivalent substitute control technique approved by the director in accordance with Env-A 1204.06.

(j) Touch-up and repair activities, excluding such activities that employ only compliant coating materials and one or more of the application techniques listed in (i), above, shall conform to the following requirements:

(1) Total non-exempt VOC consumption associated with touch-up and repair activities involving the use of conventional air spray shall not exceed 5 gallons per day per facility.

(2) Touch-up and repair activities shall not exceed 10 gallons per day where such activities involve:

a. The use of aerosol containers; or

b. That employ one or more non-compliant coating materials in conjunction with any of the application techniques listed in (i), above.

(k) As an alternative to the applicable emission rate limit(s) and/or technological controls specified in (c) through (j), above, plastic parts coating operations meeting the applicability criteria of this section may satisfy the requirements of this section either by:

(1) For emission rate limits, implementing add-on control techniques or a bubble and complying with the solids-based emission rate limits

calculated using the procedures of Env-A 1204.04(c);

(2) For technological controls, implementing (an) equivalent substitute control technique(s) in accordance with the procedures described in this part;

(3) Meeting either a coatings-based or solids-based modified emission rate limit as approved by the director and EPA in accordance with the RACT order provisions of this part in the event that the source owner or operator demonstrates that the applicable specified emission rate limit(s) in (c), (d), (e), (f), (g) or (j)(1), above, cannot be met because of technological and/or economic reasons; or

(4) Complying with (a) modified control technique(s) approved by the director and EPA in accordance with the RACT order provisions of this part in the event that the source owner or operator demonstrates that the applicable specified control technique(s) in (i) or (j)(2), above, cannot be met because of technological and/or economic reasons.

Env-A 1204.17 Applicability Criteria and Compliance Standards for the Coating of Wood Furniture, Burial Caskets, and Gunstock.

(a) All sources whose wood furniture, wood burial casket or gunstock coating and finishing operations have combined TPEs during any consecutive 12-month period after December 31, 1989, that equal or exceed the following VOC RACT applicability thresholds shall be subject to the provisions of this section:

(1) Wood furniture coating, 25 tons non-exempt VOCS;

(2) Wood burial casket coating, 50 tons non-exempt VOCs; or

3) Gunstock coating, 50 tons non-exempt VOCs.

(b) For the purposes of this section, the following definitions shall apply:

(1) “Basecoat” means a coat of colored material, usually opaque, that is applied before graining inks, glazing coats, or other opaque finishing materials and is usually topcoated for protection.

(2) “Continuous coater” means a finishing system that continuously applies finishing materials onto furniture or burial casket parts moving along a conveyor system. Finishing materials that are not transferred to the part are recycled to the finishing material reservoir.

(3) “Conversion varnish” means a special water-resistant varnish used primarily for wood cabinets and trim installed in kitchens, bathrooms and other environments where water resistance is important.

(4) “Finishing application station” means the part of a finishing operation where the finishing material is applied, such as a spray booth.

(5) “Finishing material” means a coating other than an adhesive. For the wood furniture and burial casket manufacturing industry, such materials include, but are not limited to, basecoats, stains, washcoats, sealers, topcoats, and enamels.

(6) “Finishing operation” means those activities in which a finishing material is applied to a substrate and is subsequently air dried, cured in an oven, or cured by radiation.

(7) “Normally closed container” means a container that is closed unless an operator is actively engaged in activities such as emptying or filling the container.

(8) “Pigmented coating” means a coating which is pigmented for the purpose of imparting a desired color to a product.

(9) “Pigmented primer” means the first of 2 or more films of coating applied to a surface.

(10) “Sealer” means a finishing material used to seal the pores of a wood substrate before additional coats of finishing material are applied. This term does not include special purpose finishing materials that are used in some finishing systems to optimize aesthetics.

(11) “Shader” means a pigmented coating applied in wood burial casket finishing operations which shader functions to provide a color differential on the wood surface for decorative effect.

(12) “Stain” means any color coat that is applied in single or multiple coats directly to the substrate, including, but not limited to, nongrain raising stains, equalizer stains, sap stains, body stains, no-wipe stains, penetrating stains and toners.

(13) “Strippable booth coating” means a coating that is:

a. Applied to a booth wall to provide a protective film to receive overspray during finishing operations; and

b. Subsequently peeled off and disposed.

(14) “Toner” means a coating applied to wood to minimize color differences on the unfinished wood and to allow the subsequent coating to color the wood evenly.

(15) “Washcoat” means a transparent special purpose coating that is

applied over an initial stain to protect and control color and to stiffen the wood fibers in order to aid sanding and to which a topcoat is applied.

(16) "Washoff operations" means those operations in which organic solvent is used to remove coating from a substrate.

(c) Wood furniture or burial casket finishing operations, except as specified in (d), below, shall be limited at all times to the VOC RACT emission rates stipulated below:

(1) Using topcoats with a non-exempt VOC content no greater than 0.8 kg VOC/kg solids (0.8 lb VOC/lb solids), as applied; or

(2) Using a finishing system of topcoats and sealers with a non-exempt VOC content no greater than the limits specified below:

a. For topcoats, 1.8 kg VOC/kg solids (1.8 lb VOC/lb solids), as applied; and

b. For sealers, 1.9 kg VOC/kg solids (1.9 lb VOC/lb solids), as applied; or

(3) Using an averaging approach as described in (f), below.

(d) Wood furniture finishing operations using either acid-cured alkyd amino vinyl sealers or acid-cured alkyd amino conversion varnish topcoats shall be limited at all times to the VOC RACT emission rates specified below:

(1) Using a finishing system of topcoats and sealers consisting exclusively of acid-cured alkyd amino vinyl sealers and acid-cured alkyd amino conversion varnish topcoats with a non-exempt VOC content no greater than the following:

a. For the sealers, 2.3 kg VOC/kg solids (2.3 lb VOC/lb solids), as applied; and

b. For the topcoats, 2.0 kg VOC/kg solids (2.0 lb VOC/lb solids), as applied;

(2) Using a finishing system of topcoats and sealers consisting of acid-cured alky amino conversion varnish topcoats and sealers other than acid-cured alkyd amino vinyl sealers with a non-exempt VOC content no greater than the limits specified below:

a. For the sealers, 1.91 kg VOC/kg solids (1.9 lb VOC/lb solids), as applied; and

b. For the topcoats, 2.0 kg VOC/kg solids (2.0 lb VOC/lb solids),

as applied;

(3) Using a finishing system of topcoats and sealers consisting of acid-cured alkyd amino vinyl sealers and topcoats other than acid-cured alkyd amino conversion varnish topcoats with a non-exempt VOC content no greater than the limits specified below:

a. For the sealers, 2.3 kg VOC/kg solids (2.3 lb VOC/lb solids), as applied; and

b. For the topcoats, 1.8 kg VOC/kg solids (1.8 lb VOC/lb solids), as applied; or

(4) Using an averaging approach as described in (f), below.

(e) Those processes applying a protective, decorative or functional coating onto the wood surfaces of gunstock shall be limited at all times as stipulated below:

(1) Using a finishing system of topcoats and sealers with a non-exempt VOC content no greater than the limits specified below:

a. For topcoats, 2.0 kg VOC/kg solids (2.0 lb VOC/lb solids), as applied, {averaged over any 24-hour period}; and

b. For sealers, 2.3 kg VOC/kg solids (2.3 lb VOC/lb solids), as applied, {averaged over any 24-hour period}; or

(2) Using an averaging approach as described in (f), below.

(f) A wood furniture, burial casket or gunstock finishing operation that chooses an averaging approach to limit VOC emission rates pursuant to (c)(3), (d)(4), or (e)(2), above, shall comply with the following:

(1) Provide a demonstration that actual emission rates from the applicable source are, at all times, less than or equal to allowable VOC RACT emission rates using one of the following procedures:

a. An averaging technique involving several types of topcoats in accordance with the following:

1. "TC_i" means the kilograms (or pounds) of solids of the i^{th} topcoat used;

2. "ER_{TCi}" means the non-exempt VOC content of the i^{th} topcoat in kg VOC/kg solids (or lb VOC/lb solids) as applied;

3. "N" means the total number of topcoats applied;

4. The product of 0.9, 0.8 and the sum of the TC_i shall be greater than or equal to the sum of the products of he individual ER_{TCi} and the TC_i , as in the following equation:

$$0.9 * \sum_{i=1}^{N} 0.8\ (TC_i) \geq \sum_{i=1}^{N} ER_{TCi} * (TC_i) \ ;$$

or

b. An averaging technique involving several types of topcoats, sealers, washcoats, basecoats and stains in accordance with the following:

1. "N" means the number of finishing materials participating in averaging;

2. "TC_i" means the kilograms (or pounds) of solids of the i^{th} topcoat used;

3. "SE_i" means the kilograms (or pounds) of solids of the i^{th} sealer used;

4. "WC_i" means the kilograms (or pounds) of solids of the i^{th} washcoat used;

5. ""BC_i"means the kilograms (or pounds) of solids of the i^{th} basecoat used;

6. "ST_i" means the liters (or gallons) of the i^{th} stain used;

7. "ER_{TCi}" means the non-exempt VOC content of the i^{th} topcoat in kg VOC/kg solids (or lb VOC/lb solids) as applied;

8. "ER_{SEi}" means the non-exempt VOC content of the i^{th} sealer in kg VOC/kg solids (or lb VOC/lb solids) as applied;

9. "ER_{WCi}" means the non-exempt VOC content of the i^{th} washcoat in kg VOC/kg solids (or lb VOC/lb solids) as applied;

10. "ER_{SCi}" means the non-exempt VOC Content of the i^{th} basecoat in kg VOC/kg solids (or lb VOC/lb solids) as applied;

11. "ER_{STi}" means the non-exempt VOC content of the i^{th} stain in kg VOC/liter stain, (or lb VOC/gal stain) as

applied;

12. “TCS” means the product of 1.8 and the sum of the individual TCi;

13. “SES” means the product of 1.9 and the sum of the individual SEi;

14. “WCS” means the product of 9.0 and the sum of the individual WCi;

15. “BCS” means the product of 1.2 and the sum of the individual BCi;

16. “STS” means the product of 0.791 and the sum of the individual STi;

17. “AG” means the sum of TCS, SES, WCS, BCS, and STS, as in the following equation:

$$AG = \sum_{i=1}^{N} (1.8\ (TC_i) + 1.9\ (SE_i) + 9.0\ (WC_i) + 1.2\ (BC_i) + 0.791\ (ST_i))\ ;$$

18. “ERTC” means the sum of the products of the individual ERTCi and the individual TCi ;

19. “ERSE" means the sum of the products of the individual ERSEi and the individual SEi ;

20. “ERWC” means the sum of the products of the individual ERWCi and the individual WCi ;

21. “ERBC” means the sum of the products of the individual ERBCi and the individual BCi ;

22. “ERST” means the sum of the products of the individual ERSTi and the individual STi ;

23. “AL” means the sum of ERTC, ERSE, ERWC, ERBC, and ERST, as in the following equation:

$$AL = \sum_{i=1}^{N} (ER_{TCi} * (TC_i) + ER_{SEi} * (SE_i) + ER_{WCi} * (WC_i) + ER_{BCi} * (BC_i) + ER_{STi} * (ST_i))\ ;$$

24. The product of 0.9 and AG shall be greater than or equal to AL, as in the following equation:

$$0.9 * AG \geq AL$$

(2) Any source intending to comply with the requirements of this section by means of an averaging approach shall provide an averaging proposal to the division for approval in accordance with (3), below.

(3) All averaging proposals submitted to the division pursuant to (2), above, shall contain the following:

a. A detailed plant description, including all coatings and finishing materials intended by the source to be included in the averaging technique;

b. A demonstration of the need for the use of an averaging approach versus compliance with the emission limits specified in (c), (d), or (e), above, where applicable;

c. A description of additional environmental benefits, if any, to the use of an averaging approach;

d. The baseline emissions of non-exempt VOCs from all processes or devices to be included in the averaging technique;

e. A detailed description of the procedures to be used by the source to quantify the non-exempt VOC emissions at the source, including:

1. A detailed discussion of the procedures to be used by employees to track said emissions; and

2. A description of the equations and calculations used to quantify the actual allowable emission; and

f. An implementation schedule ensuring that the source is in compliance by the effective date of this rule;

(5) The director shall review all averaging proposals submitted in accordance with (f)(3), above, and shall take the following action(s):

a. Determine the completeness status of all said proposals within 30 calendar days from the date of receipt by the division and request additional information from all sources having incomplete proposals;

b. Approve or disapprove all averaging proposal within 30 calendar days of the date when deemed complete by the director; and

(6) The source shall submit any additional information or data requested by the director pursuant to (5)a., above, within 30 calendar days of said request.

(g) The non-exempt VOC content or amount of organic solvents and strippable booth coatings associated with spray booth cleaning operations for spray booths used in wood furniture or wood burial casket finishing operations or gunstock coating processes shall not, at any time, exceed the following limits:

(1) For organic solvents used to clean spray booth components other than conveyors, continuous coaters and their enclosures, and/or metal filters of spray booths that are not being refurbished, 8.0% by weight of VOC;

(2) For organic solvents used to clean a spray booth that is being refurbished, 1.0 gallons of organic solvent; and

(3) For strippable booth coatings, 0.8 kg VOC/kg solids (0.8 lb VOC/lb solids), as applied.

(h) In addition to the requirements of (g), above, VOC emissions associated with materials storage or solvent cleaning operations applicable to wood furniture or burial casket finishing operations, or gunstock coating, shall be controlled as follows:

(1) All finishing and cleaning material shall be stored in a normally closed container;

(2) All organic solvent used for line cleaning shall be pumped or drained into a normally closed container;

(3) All organic solvent used to clean spray guns shall be collected into a normally closed container; and

(4) Emissions from washoff operations shall be controlled by:

a. Using normally closed tanks for washoff; and

b. Minimizing dripping by tilting or rotating the part to drain as much organic solvent as possible.

(i) The following shall be met by all wood furniture, wood burial casket and gunstock coating facilities:

(1) For all operations, one or more of the following control techniques shall be used:

a. High volume - low pressure (HVLP) spray;

b. Airless spray;

c. Air-assisted airless spray;

d. Flow coating techniques;

e. An equivalent substitute control technique approved by the director in accordance with Env-A 1204.06; or

f. Conventional air spray under any one or more of the following circumstances:

1. The application of finishing materials having a non-exempt VOC content not greater than 1.0 kg VOC/kg solids (1.0 lb VOC/lb solids), as applied ;

2. The spray is automated;

3. The emissions from the finishing application station are directed to add-on control equipment;

4. The conventional air spray gun is used to apply finishing materials and the cumulative total usage of that finishing material is less than 5.0% of the total gallons of finishing material used during the applicable semi-annual reporting period;

5. The conventional air gun is used to apply stain on a part for which it is technically or economically infeasible to use any other spray application technology, as demonstrated in accordance with the provisions of (2), below; or

6. Touch-up and repair activities in accordance with the provisions of (j) , below.

(2) Any source intending to use conventional air spray pursuant to (i)(1)f.5., above, shall demonstrate technical or economic infeasibility by submitting to the division a videotape, a technical report, or other documentation that supports the affected source's claim of technical or economic feasibility, to be determined in accordance with (3), below.

(3) The following criteria, shall be used, either independently or in combination, to support the affected source’s claim of technical or economic infeasibility pursuant to (2), above:

a. The production speed is too high or the part shape is too complex for a single operator to coat the part and the application station is not large enough to accommodate an additional operator;

or

b. The excessively large vertical spray area of the part makes it difficult to avoid runs in the stain or sagging of the part.

(j) Touch-up and repair activities, excluding such activities that employ only compliant coating materials and one or more of the application techniques listed in (i)(1), above, shall conform to the following requirements:

(1) Touch-up and repair activities using conventional air spray shall conform to one or more of the following requirements:

a. The touch-up and repair finishing materials shall be applied after the completion of the finishing operation; or

b. The touch-up and repair finishing materials shall be:

1. Applied after the application of the stain and prior to the application of any other types of finishing material; and

2. Applied from a container with a capacity of not more than 2 gallons;

c. Total non-exempt VOC consumption associated with touch-up and repair activities using conventional air spray shall not exceed 5 gallons per day at a stationary source; and

(2) Consumption of touch-up and repair finishing materials shall not exceed 10 gallons per day where such activities employ:

a. The use of aerosol containers; or

b. One or more non-compliant coating materials in conjunction with any of the application techniques listed in (i)(1), above.

(k) Owners or operators of RACT applicable wood furniture coating sources shall prepare an initial training course and an annual refresher course to be given to all source personnel, including contract personnel, who are directly involved in the implementation of this rule meeting the requirements specified below:

(1) The personnel training courses shall consist of, at a minimum, all of the following elements:

a. A list of all personnel, including contract personnel, by name and job description;

b. An outline of the subjects to be covered, for each person or group of personnel, in the initial training course and each refresher

course;

c. Lesson plans for the initial training course and each refresher course that include, at a minimum:

1. Application techniques;

2. Cleaning procedures, including appropriate management of cleanup wastes; and

3. Appropriate equipment assembly and adjustment to minimize coating and finishing material usage and overspray; and

d. A description of the personnel examination methods to be used at the completion of the initial and refresher training to demonstrate and document successful completion; and

(2) The source owner or operator shall maintain a copy of all course materials developed pursuant to (1), above, for inspection by the division upon demand.

(l) Each owner or operator of a wood furniture coating source shall prepare and maintain a copy of a leak inspection and maintenance plan that contains the following:

(1) A minimum visual inspection frequency of once per month for all equipment used to transfer or apply finishing materials or organic solvents;

(2) An inspection schedule;

(3) Methods for documenting the date and results of each inspection and any repairs that were made;

(4) The timeframe between identifying the leak and making the repair, in accordance with the following schedule:

a. The first repair attempt, such as tightening of packing glands, shall be made no later than 5 business days after the leak is initially detected; and

b. Final repair(s) shall be made within the following time periods:

1. If the leaking equipment is to be replaced by a new purchase, not later than 90 calendar days after initial leak detection; or

2. If the leaking equipment is not to be replaced by a new purchase, not later than 15 business days after initial leak detection.

(m) Each owner or operator of a wood furniture coating source shall develop an organic solvent accounting form to record the following for each calendar month:

(1) The quantity and type or organic solvent used for washoff and cleaning;

(2) The number of pieces washed off, and the reason for the washoff; and

(3) The quantity of spent organic solvent generated from each activity and the quantity of said solvent that is recycled on-site or disposed off-site.

(n) As an alternative to the applicable emission rate limit(s) and/or technological or operation and maintenance controls and/or work practice standards specified in (c) through (m), above, whichever requirements are applicable, wood furniture, wood burial casket or gunstock coating and finishing operations meeting the applicability criteria of this section may satisfy the requirements of this section by one or more of the following methods:

(1) Installing and using an add-on control system that results in emissions to the atmosphere that do not numerically exceed the applicable non-exempt VOC content limit(s), validated by the procedure described in (o), below;

(2) For technological controls, implementing (an) equivalent substitute control technique(s) in accordance with the procedures described in this part;

(3) Meeting either a coatings-based or solids-based modified emission rate or non-exempt non-exempt VOC content limit as approved by the director and EPA in accordance with the RACT order provisions of this part in the event that the source owner or operator demonstrates that one or more of the following cannot be met because of technological and/or economic reasons:

a. The applicable specified emission rate limit(s) in (c), (d), (e), (f) or (i)(1)f.1., above; or

b. The applicable non-exempt VOC content limit(s) prescribed in (g), above; or

(4) Complying with (a) modified control technique(s) approved by the director and EPA in accordance with the RACT order provisions of this part in the event that the source owner or operator demonstrates that the applicable specified control technique(s) in (h), (i), (j), (k), (l) or (m),

above cannot be met because of technological and/or economic reasons.

(o) Sources selecting an alternative compliance technique pursuant to (n)(1), above, shall demonstrate, in accordance with the procedures of Env-A 803.03(b), that the overall percentage reduction R_c achieved by the add-on control system exceeds the percentage reduction required to meet the applicable non-exempt VOC content limit, determined as follows:

(1) "C_v" means the non-exempt VOC content of the coating, in kg VOC/kg solids (lb VOC/lb solids), as applied;

(2) "C_{vp}" means the applicable maximum allowable non-exempt VOC content prescribed in this section;

(3) "R_{op}" means the overall percentage reduction R_o achieved by the add-on control system; and

(4) R_{op} shall be greater than or equal to the difference between C_v and C_{vp}, divided by C_v and multiplied by 100, as in the following equation:

$$R_{op} \geq 100 * (C_v - C_{vp}) / C_v .$$

Env-A 1204.18 Applicability Criteria and Compliance Standards for Rotogravure and Flexographic Printing.

(a) All sources whose rotogravure or flexographic printing operations have combined TPEs during any consecutive 12-month period after December 31, 1989 which equal or exceed 50 tons of VOCs shall be subject to the provisions of this section.

(b) For the purpose of this section, the following definitions shall apply:

(1) "Packaging rotogravure printing" means rotogravure printing upon paper, paper board, metal foil, plastic film, and other substrates, which are, in subsequent operations, formed into packaging products and other non-publication products;

(2) "Publication rotogravure printing" means rotogravure printing upon paper which is subsequently formed into books, magazines, catalogues, brochures, directories, newspaper supplements, and other types of printed materials such as pamphlets, periodicals, direct mail advertisements and display advertisements; and

(3) "Roll printing" means the application of words, designs and pictures to a substrate usually by means of a series of rolls each with only partial coverage.

(c) Those processes using packaging rotogravure, publication rotogravure, or

flexographic printing shall be subject to the equivalent one of the following:

(1) Each ink, as it is applied to the substrate, less water and non-volatile organic compounds, shall contain no more than 40% by volume of VOCs;

(2) The volatile fraction of each ink, as it is applied to the substrate, shall contain no more than 25.0% by volume of VOCs and at least 75.0% by volume of water and non-volatile organic compounds; or

(3) The owner or operator of such processes installs and operates:

a. A carbon adsorption system which reduces the rate of VOC emissions delivered from the capture system to the control equipment by at least 90% by weight over the adsorption cycle or 24 hours, whichever is less; or

b. Incineration control equipment which reduces the rate of VOC emissions delivered from the capture system to the incineration inlet by at least 90% by weight.

(d) A capture system shall be used in conjunction with the emission control system selected pursuant to (c), above, and subject to the requirements of (e), below.

(e) The design and operation of a capture system installed pursuant to (d), above shall be consistent with good engineering practice and shall provide for an overall reduction in VOC emissions from each printing press of:

(1) At least 75% where a publication rotogravure process is employed;

(2) At least 65% where a packaging rotogravure process is employed; or

(3) At least 60% where a flexographic printing process is employed.

(f) As an alternative to the applicable VOC limit(s) and/or technological control standards specified in (c), (d), or (e), above, whichever requirements are applicable, rotogravure and flexographic printing operations meeting the applicability criteria of this section may satisfy the requirements of this section by:

(1) Complying with the RACT order provisions of this part; or

(2) For technological control standards, implementing (an) equivalent substitute control technique(s) in accordance with the procedures described in this part.

Env-A 1204.19 Applicability Criteria and Compliance Standards for Offset Lithographic Printing.

(a) All sources whose offset lithographic printing operations have combined TPEs during any consecutive 12-month period after December 31, 1989 which equal or exceed 50 tons of VOCs shall be subject to the provisions of this section.

(b) For the purpose of this section, the following definitions shall apply:

(1) “Alcohol substitute” means any non-alcohol additive that contains VOCs and is used in the fountain solution.

(2) "”Blanket” means the intermediary surface referred to in the definition of offset lithography in Env-A 1204.03.

(3) “Cleaning solution” means any liquid used to remove ink and debris from the surfaces of the printing press and its parts.

(4) “Dampening system” means equipment used to deliver the fountain solution to the lithographic plate.

(5) “Fountain solution” means a mixture of water, volatile and non-volatile printing chemicals, and additives that maintains the quality of the printing plate and reduces the surface tension of the water so that it spreads easily across the printing surfaces. Examples of VOC additives include isopropyl alcohol, glycol ethers, and ethylene glycol.

(6) “Heatset” means any operation where heat is required to set the printing ink.

(7) “Heatset dryer” means any device used in heatset web offset lithographic printing to heat the printed substrate and to promote the evaporation of ink oils.

(8) “Non-heatset” means any operation where the printing inks are set without the use of heat. This term includes ultraviolet-cured inks.

(9) “Press” means a printing production assembly that can be made up of one or many units to produce a finished product.

(10) “Sheet-fed” means any operation where paper is fed to the press in individual sheets.

(11) “Unit” , for the purpose of this section, means the smallest complete component of a printing press which is capable of printing only one color.

(12) “VOC composite partial pressure” means the sum of the partial pressures of the solvent compounds defined as VOCs.

(13) “Web” , for the purpose of this section, means a continuous roll of paper used as the printing substrate.

(c) Owners and operators of offset lithographic printing presses shall comply with the control requirements described below:

(1) Cleaning solution, used for blanket and ink roller washes shall not exceed the following VOC RACT limits:

a. Non-exempt VOC content of 30.0% by weight, as applied; or

b. Non-exempt VOC content of 0.9 kg/per liter (7 .43 lb. per gallon) of cleaning solution, as applied, with a VOC composite partial pressure of 10 mm Hg (0.19 pounds per square inch) or less at 20°C (68°F);

(2) All cleaning materials and soiled towels used for manual cleaning shall be kept in closed containers;

(3) The VOC emissions from the dryer exhaust of heatset inks:

a. Shall be reduced by at least 90.0%, by weight, of total organics, less methane and ethane; or

b. Shall not exceed 20 parts per million, by volume, prior to dilution; and

(4) The fountain solution:

a. Used in heatset web offset lithographic printing presses, shall be limited to one of the following:

1. Non-exempt VOC content of 1.6 % or less, by weight;

2. Non-exempt VOC content of 3.0% or less, by weight, if the fountain solution is refrigerated to a temperature below 60°F (16°C); or

3. Non-exempt VOC content of 5.0% or less, by weight, if the fountain solution contains no alcohol;

b. Used in sheet-fed offset lithographic facilities, shall be limited to either of the following:

1. Non-exempt VOC content of 5.0% or less, by weight; or

2. Non-exempt VOC content of 8.5% or less, by weight, if the fountain solution is refrigerated to a temperature below 60°F (16°C); and

c. Used in non-heatset web-fed offset lithographic printing

processes, including both newspaper and non-newspaper facilities, shall contain no alcohol and the concentration of total non-exempt VOCs shall not exceed 5.0%, by weight, in the final solution.

(d) As an alternative to the applicable VOC limit(s) and/or operational control standards specified in (c), above, whichever requirements are applicable, offset lithographic operations meeting the applicability criteria of this section may satisfy the requirements of this section by:

(1) Complying with the RACT order provisions of this part; or

(2) For operational control standards, implementing (an) equivalent substitute control technique(s) in accordance with the procedures described in this part.

Env-A 1204.20 Applicability Criteria and Compliance Standards for Fixed-Roof Tank VOL Storage.

(a) All sources with vertical fixed-roof VOL storage tanks where storage capacity exceeds 150,000 liters (40,000 gallons) shall comply with this section with the following exceptions:

(1) Any such tank having a storage capacity between 150,000 and 1,600,000 liters (between 40,000 and 420,000 gallons), which is used to store produced crude oil and condensate prior to lease custody transfer; and

(2) Any such tank used to store a VOL with a maximum true vapor pressure or less than 10.5 kilopascals (1.52 pounds per square inch atmospheric) under actual storage conditions, as determined by methods described API Bulletin 2517, and as verified by records maintained consistent with the provisions of Env-A 901.03.

(b) For the purpose of this section, the following definitions shall apply:

(1) “Internal floating roof” means a cover or roof in a fixed roof tank which rests upon or is floated upon the petroleum liquid being contained, and is equipped with a closure seal or seals to close the space between the roof edge and tank shell; and

(2) “True vapor pressure” means the equilibrium partial pressure exerted by a VOL as determined in accordance with methods described in American Petroleum Institute Bulletin 2517, “Evaporation Loss From Floating Roof Tanks”, second edition, Feb. 1980.

(c) An above-ground, vertical, fixed roof tank meeting the applicability criteria of this section shall use the following control techniques:

(1) The tank shall be retrofit with an internal floating roof equipped with a closure seal, or seals, to close the space between the roof edge and tank wall;

(2) Closure seals shall be maintained such that there are no visible holes, tears, or other openings in the seal(s) or any seal fabric or materials;

(3) All openings, except stub drains, shall be equipped with covers, seals, or lids which shall be kept closed at all times except when in actual use;

(4) Automatic bleeder vents shall remain closed at all times except when the roof is floated off or being landed on the roof leg supports;

(5) Rim vents, if provided, shall be set to open when the roof is being floated off the roof leg supports or at the manufacturer's recommended setting;

(6) Visible inspections of the internal floating roof and its closure seal(s) through roof hatches shall be conducted at least once per month; and

(7) A complete inspection of cover and seal shall be conducted whenever the tank is emptied for non-operational reasons or at least once per year.

(d) As an alternative to the control techniques specified in (c), above, above-ground, vertical fixed roof tanks meeting the applicability criteria of this section may satisfy the requirements of this section by either:

(1) Complying with the RACT order provisions of this part; or

(2) Implementing equivalent substitute control technique(s) in accordance with the procedures described in this part.

Env-A 1204.21 Applicability Criteria and Compliance Standards for External Floating Roof Tanks.

(a) All sources with external floating roof tanks where storage capacity exceeds 150,000 liters (40,000 gallons) shall comply with the requirements of this section with the following exceptions:

(1) Any such tank having a storage capacity between 150,000 and 1,600,000 liters (between 40,000 and 420,000 gallons), which is used to store produced crude oil and condensate prior to lease custody transfer; and

(2) Any such tank used to store a VOL with a maximum true vapor pressure of less than 10.5 kilopascals (l.52 pounds per square inch atmospheric) under actual storage conditions, as determined by methods described in API Bulletin 2517, and as verified by records maintained

consistent with the provisions of Env-A 901.03;

(3) Any such tank used to store waxy, heavy-pour crude oil;

(4) Any such tank used to store VOL which:

a. Has a maximum true vapor pressure of less than 27.6 kPa (4.0 psia);

b. Is of welded construction; and

c. Was equipped with one of the following prior to the effective date of the applicable rule:

1. A metallic shoe seal;

2. A liquid-mounted foam seal;

3. A liquid-mounted liquid-filled type seal; or

4. An EPA-approved closure equipment of demonstrated equivalence; or

(5) Any such tank that:

a. Is of welded construction; and

b. Was equipped with one of the following prior to the effective date of the applicable rule:

1. A metallic-type shoe primary seal; and

2. A shoe mounted secondary seal.

(b) For the purpose of this section, the following definitions shall apply:

(1) “Liquid-mounted seal” means a primary seal mounted around the circumference of the cylindrical tank in continuous contact with the liquid between the tank wall and the floating roof;

(2) “Rim-mounted secondary seals” means a continuous seal extending from the floating roof to the tank wall;

(3) “Shoe-mounted secondary seal" means a secondary seal that extends circumferentially from the top of the shoe seal to the tank wall;

(4) “Shoe seal” means a seal consisting of a metal sheet connected by braces to the floating roof and held tight against the wall of a vertical tank

by springs or weighted levers;

(5) “Vapor-mounted seal” means a primary seal mounted so there is an annular vapor space underneath the seal, which space is bounded by the bottom of the primary seal, the tank wall, the liquid surface, and the floating roof; and

(6) “Waxy, heavy-pour crude oil” means a crude oil with a pour point of 10°C (50°F) or higher as determined by the American Society for Testing and Materials Standard D 97 - 93, “Test for Pour Point of Petroleum Oils”.

(c) An external floating roof tank meeting the applicability criteria of this section shall use the following VOC control techniques:

(1) The tank shall be fitted with:

a. A rim-mounted secondary seal; or

b. A closure or other device that:

1. Controls VOC emissions with an effectiveness equal to or greater than a rim-mounted secondary seal, and

2. Is approved by the EPA Administrator as a state implementation plan or federal implementation plan revision;

(2) All seal closure equipment shall be maintained such that there are no visible holes, tears or other openings in the seal(s) or seal fabric;

(3) The seal(s) shall remain intact and uniformly in place around the circumference of the floating roof between the floating roof and the tank wall;

(4) For floating roofs equipped with vapor-mounted primary seals, the accumulated area of gaps exceeding 0.32 cm (0.125 in.) in width between the secondary seal and the tank wall shall not exceed 21.2 sq. cm. per m. (1.0 sq. in. per ft.) of tank diameter, as determined by the method referenced in (d) of this section;

(5) All openings in the external floating roof, except for automatic bleeder vents, rim space vents, and leg sleeves shall be equipped with covers, seals, or lids in the closed position, except when the openings are in actual use, and shall have projections into the tank that remain below the liquid surface at all times;

(6) Automatic bleeder vents shall remain closed at all times except when

the roof is being floated off or being landed on the roof leg supports;

(7) Rim vents shall be set to open when the roof is being floated off the leg supports or at the manufacturer's recommended setting;

(8) Emergency roof drains shall be provided with slotted membrane fabric covers or equivalent covers which cover at least 90% of the area of the opening;

(9) Inspections in accordance with the provisions of Env-A 803.06 (a) shall be performed semi-annually to ensure compliance with (c)(2), (3) and (5) of this section; and

(10) The secondary seal gap shall be measured annually in accordance with (c)(4) of this section and Env-A 803.06 when the floating roof is equipped with a vapor-mounted primary seal.

(d) Compliance with (c)(4) of this section shall be determined by:

(1) Physically measuring the length and width of all gaps around the entire circumference of the secondary seal in each place where a 0.32 cm (0.125 in.) uniform diameter probe passes freely, without forcing or binding against the seal, between the seal and the tank wall; and

(2) Summing the area of the individual gaps.

(e) As an alternative to the control techniques specified in (c), above, external floating roof tanks meeting the applicability criteria of this section may satisfy the requirements of this section by either:

(1) Complying with the RACT order provisions of this part; or

(2) Implementing (an) equivalent substitute control technique (s) in accordance with the procedures described in this part.

Env-A 1204.22 Applicability Criteria and Compliance Standards for Bulk Gasoline Loading Terminals.

(a) Any bulk gasoline loading terminal meeting the definitional criteria of Env-A 1204.03 as of January 1, 1990 shall comply with the requirements of this section.

(b) Bulk gasoline terminal operations shall use the following control techniques:

(1) VOC vapor emitted from tank truck loading operations at a bulk gasoline terminal shall be collected and controlled by equipment limiting the total non-exempt VOC emission rate from the controlled operations over any 1-hour period to 80 mg of VOC per liter (0.08 ounces per cubic foot) of gasoline loaded;

(2) All equipment such as pumps, tanks, couplings, hoses, and seals, used in loading gasoline trucks and controlling VOC emissions during loading, shall be maintained in leak tight condition, as determined through test and maintenance procedures specified in the following document published by EPA:

EVALUATION OF VAPOR LEAKS AND DEVELOPMENT OF MONITORING PROCEDURES FOR GASOLINE TANK TRUCKS AND VAPOR PIPING
Document number EPA-450/3-79 -018
Office of Air Quality Planning and Standards
U. S. Environmental Protection Agency
Research Triangle Park, NC 27711
April, 1979;

(3) The bulk gasoline loading terminal shall be equipped with a vapor control system, capable of complying with (b)(1), above, and consisting of one of the following:

a. An adsorber or condensation system which processes and recovers at least 90% by weight of all vapors and gases from the devices being controlled;

b. A vapor collection system which directs all vapors to a fuel gas system and destroys at least 90% by weight of all vapors and gases from the devices being controlled; or

c. A control system demonstrated to have control efficiency equivalent to or greater than a. or b. and approved by the director in accordance with the procedures of Env-A 807.01;

(4) All displaced vapors and gases shall be vented only to the vapor control system;

(5) Operations to which (b), above, applies shall not:

a. Allow gasoline to be discarded in sewers or stored in open containers or handled in any manner that would result in evaporation; or

b. Allow the pressure in the vapor collection system to exceed the tank truck or trailer pressure relief settings;

(6) Loading of liquid product into gasoline tank trucks shall be limited to vapor-tight gasoline trucks, during which the terminal owner or operator shall:

a. Obtain the vapor tightness documentation from the tank truck

driver for each gasoline tank truck that is to be loaded at the bulk gasoline terminal loading rack;

b. Require the tank identification number to be recorded as each gasoline tank truck is loaded at the terminal;

c. Cross-check each tank identification number obtained in (6)b., above, with the file of tank vapor tightness documentation within 2 weeks after the corresponding tank is loaded;

d. Notify the owner or operator or each non-vapor-tight gasoline tank truck loaded at the bulk gasoline terminal loading rack within 3 weeks after the loading has occurred that the truck is not vapor tight; and

e. Develop and follow procedures to assure that no gasoline tank truck deemed to be non-vapor-tight under clause(s) (6)a., (6)b. and (6)c., above, will be reloaded until vapor tightness documentation for that tank is obtained;

(7) The terminal owner or operator shall take measures to ensure that:

a. Loadings of gasoline tank trucks at the bulk gasoline terminal loading rack are made only into tanks equipped with vapor collection equipment that is compatible with the terminal's vapor collection system; and

b. The vapor collection systems or the terminal and tank truck are connected at the bulk gasoline tank truck at the bulk gasoline terminal loading racks during each loading;

(8) The vapor collection and liquid loading equipment shall be designed and operated to prevent gauge pressure in the delivery tank from exceeding 4,500 Pa, equivalent to 0.65 psi or 18 in. of water, during product loading. Measurement of the gauge pressure shall be as follows:

a. A pressure measuring instrument, such as a liquid manometer or equivalent, capable of measuring up 500 mm mercury (20 in. water) gauge pressure, with a precision of ±2.5 mm mercury (±20 in. water) shall be calibrated and installed.

b. The pressure measuring instrument shall be connected to a pressure tap in the vapor collection system or the terminal, located as close as possible to the connection with the gasoline tank truck.

c. During the performance test, gauge pressures shall be recorded at least once for each loading position according to the following procedure:

1. The pressure shall be recorded every 5 minutes during the loading of a gasoline tank; and

2. The highest instantaneous pressure that occurs during each loading shall be recorded;

(9) No pressure-vacuum vent in the bulk gasoline terminal's vapor collection system shall begin to open at a system pressure less than 4500 Pa, or 0.65 psi;

(10) At least once each calendar month, the vapor collection system, vapor control system, and each loading rack handling gasoline shall be inspected for total liquid or vapor organic compound leaks during the loading of gasoline tank trucks. Visual, sound or odor detection methods shall be acceptable;

(11) Each detection of a leak shall be recorded and the source of the leak repaired within 15 calendar days after it is detected; and

(12) Loading of outgoing gasoline tank trucks shall be restricted to the use or submerged fill.

(c) As an alternative to the control techniques specified in (b), above, bulk gasoline loading terminals meeting the definitional criteria of Env-A 1204.03 may satisfy the requirements of this section by either:

(1) Complying with the RACT order provisions of this part; or

(2) Implementing (an) equivalent substitute control technique(s) in accordance with the procedures described in this part.

Env-A 1204.23 Applicability Criteria and Compliance Standards for Bulk Gasoline Plants.

(a) Any source with a bulk gasoline plant meeting the definitional criteria of Env-A 1204.03 as of January 1, 1990 shall comply with the requirements of this section.

(b) For the purpose of this section, “Stage I vapor balance systems” means a closed system that allows the transfer or balancing of vapors, displaced during the loading or unloading of gasoline at a bulk gasoline plant, from the tank being loaded to the tank being unloaded.

(c) Bulk gasoline plants shall use the VOC control techniques specified below, depending on the facility 's storage capacity or average daily throughput:

(1) All bulk gasoline plants, regardless of storage capacity or average daily throughput, shall use the following control techniques:

a. Filling of storage tanks shall be restricted to the use of submerged fill;

b. Loading of outgoing gasoline tank trucks shall be restricted to the use of submerged fill; and

c. The bulk plant owner or operator and the owner or operator of each tank truck engaged in transfer operations at the bulk plant shall:

1. Observe all transfer operations involving the subject tank truck; and

2. Discontinue transfer immediately upon the observation of any vapor or liquid leaks associated with the transfer operation.

(2) Any bulk gasoline plant having an average daily throughput of 15,000 liters (4,000 gallons) or more based on any consecutive 30-day period during the ozone season for the calendar year 1989 or any subsequent year shall be equipped with the following VOC control equipment:

a. A Stage I vapor balance system between each incoming gasoline tank truck and any gasoline storage tank having a capacity or more than 2,082 liters (550 gallons); and

b. A Stage I vapor balance system between each outgoing gasoline tank truck and any gasoline storage tank having a capacity of more than 2,082 liters (550 gallons).

(3) All Stage I vapor balance systems installed pursuant to (2), above, shall be as follows:

a. All Stage I vapor balance systems installed pursuant to (2)a., above, shall be equipt with line fittings that:

1. Are vapor-tight, and

2. Automatically close upon disconnection

b. All Stage I vapor balance systems installed pursuant to (2)b., above, shall be designed to prevent any transfer of collected vapors between loading racks; and

(4) The owner or operator of any bulk gasoline plant having an average daily throughput of 15,000 liters (4,000 gallons) or more based on any consecutive 30-day period during the ozone season for the calendar year 1989 or any subsequent year shall ensure that the following VOC control

procedures are observed during all transfer and storage operations:

a. The Stage I vapor balance system required in (2), above, shall remain connected between the tank truck and storage tank;

b. For storage tanks with a capacity of more than 2,082 liters (550 gallons), tank openings, including inspection hatches and gauging and sampling devices, shall remain vapor tight when not in use;

c. The gasoline tank truck compartment hatch cover shall remain closed during product transfer;

d. Gauge pressure shall not:

1. Exceed 450 millimeters (18 inches) of water in the gasoline tank truck; or

2. Exceed 150 millimeters (5.9 inches) of water in the vapor balance system vacuum during product transfer operations;

e. Compliance with (c)(4)d., above, shall be determined by means of a pressure measuring device, such as a liquid manometer, magnehelic gauge, or equivalent instrument, as follows:

1. Said device shall be capable of measuring 500 mm (20 in.) of water gauge pressure with a precision of ±2.5 mm (±0.098 in.);

2. Said device shall be calibrated and installed on the bulk gasoline plant vapor balance system at a pressure tap which is located as close as possible to the connection with the gasoline tank truck.

f. No pressure vacuum relief valve in the bulk gasoline plant vapor balance system shall begin to open at:

1. A system pressure of less than 450 millimeters (18 inches) of water; or

2. A vacuum of less than 150 millimeters (5.9 inches) of water;

g. Loading of liquid product into gasoline tank trucks shall be limited to vapor-tight tank trucks; and

h. At least once each calendar month, the vapor balance systems required by (2) and each loading rack used in loading gasoline tank

trucks shall be inspected for liquid or vapor leaks during product transfer operations. Visual, sound or odor detection methods shall be acceptable; and

i. Each detection of a leak shall be recorded and the source of the leak repaired within 15 calendar days after it is detected.

(d) As an alternative to the control techniques and equipment specified in (c), above, bulk plants meeting the definitional criteria of Env-A 1204.03 may satisfy the requirements of this section by:

(1) Complying with the RACT order provisions of this part; or

(2) Implementing (an) equivalent substitute control technique(s) in accordance with the procedures described in this part.

Env-A 1204.24 Applicability Criteria and Compliance Standards for Petroleum Refineries.

(a) All petroleum refinery operations with any vacuum-producing systems, wastewater separators, or process unit turnarounds at the source, except segregated stormwater runoff drain systems or non-contact cooling water systems, shall be subject to the provisions of this section.

(b) For the purpose of this section, the following definitions shall apply:

(1) "Accumulator" means the reservoir of a condensing unit receiving the condensate from the condenser;

(2) "Condenser" means any heat transfer device used to liquefy vapors by removing their latent heats of vaporization. This term includes, but is not limited to, shell and tube, coil, surface, or contact condensers;

(3) "Firebox" means the chamber or compartment of a boiler or furnace in which materials are burned but shall not mean the combustion chamber of an incinerator;

(4) "Forebays" mean the primary sections of a wastewater separator;

(5) "Hot well" means the reservoir of a condensing unit receiving the warm condensate from the condenser;

(6) "Refinery fuel gas" means any gas which is generated by a petroleum refinery process unit and which is combusted, including any gaseous mixture of natural gas and fuel gas;

(7) "Turnaround" means the procedure of shutting a refinery unit down after a run to do necessary maintenance and repair work and putting the

unit back on stream;

(8) “Vacuum producing system” means any reciprocating, rotary, or centrifugal blower or compressor, or any jet ejector or device that takes suction from a pressure below atmospheric and discharges against atmospheric pressure;

(9) “Refinery vapor recovery system” means a system that prevents release to the atmosphere of no less than 90% by weight of organic compounds emitted during the operation of any transfer, storage, or process device; and

(10) “Wastewater separator” means any device or piece of equipment which utilizes the difference in density between oil and water to remove oil and associated chemicals from water, or any device, such as a flocculation tank or clarifier, which removes petroleum derived compounds from wastewater.

(c) Those processes involved in the production of gasoline, kerosene, distillate and residual fuels, or other products through distillation, cracking, extraction, or reforming of petroleum derivatives, shall control the emissions from vacuum producing systems, wastewater separators, and process unit turnarounds using the techniques specified below:

(1) Vacuum producing system VOC emissions from condensers, hot wells and accumulators shall be:

a. Piped to a firebox or incinerator; or

b. Compressed and added to refinery fuel gas;

(2) Wastewater separators, including forebays, shall be:

a. Covered and sealed at all times except during maintenance and repair; and

b. Equipped with lids or seals kept in the closed position at all times except when in actual use;

(3) Process unit turnarounds shall provide for the depressurization venting of a process unit or vessel to a refinery vapor recovery system, flare, or firebox, until internal pressures are less than 136 kilopascals (19.7 psia); and

(4) All equipment such as pumps, tanks, valves and seals used in the processing of petroleum and its derivatives, shall be maintained in leak tight condition as assured through test and maintenance procedures referenced in Env-A 803.07.

(d) As an alternative to the control techniques specified in (c), above, petroleum refineries meeting the applicability criteria of this section may satisfy the requirements of this section by:

(l) Complying with the RACT order provisions of this part; or

(2) Implementing (an) equivalent substitute control technique(s) in accordance with the procedures described in this part.

Env-A 1204.25 Applicability Criteria and Compliance Standards for Cutback and Emulsified Asphalt.

(a) Any source using cut-back or emulsified asphalt in the paving of public roads or highways shall comply with the requirements of this section.

(b) For the purpose of this section, the following definitions shall apply:

(1) "Medium Curing Cutback Asphalt" means a material which meets the specifications of the American Association of State Highway and Transportation Officials (AASHTO) designation M82-75 (1993); and

(2) "Penetrating Prime Coat" means an application of low-viscosity liquid asphalt to an absorbent surface used to prepare an untreated base for an asphalt surface.

(c) Cutback asphalt shall not be used in the paving and maintenance of public roads and highway during the months of June through September with the following exceptions:

(l) The use of medium curing cutback asphalts solely as penetrating primecoat for aggregate bases prior to paving;

(2) The use of medium curing cutback asphalts for the manufacture of long-term storage or stockpiling of patching mixes used in pavement maintenance; or

(3) The use of cutback asphalts for which the user can demonstrate, in accordance with (d), below, that minimal emissions shall occur under conditions of normal use.

(d) For cutback asphalt users seeking application permits during the months of June through September, an acceptable demonstration of minimal emissions shall be the submittal of distillation test data in accordance with ASTM Method D-402, Distillation of Cutback Asphalt Products, showing that less than 5% of the total solvent has evaporated up to and including 260°C (500°F) .

(e) Emulsified asphalt used in the paving and maintenance of public roads and highways shall contain no petroleum solvents except for uses and with maximum

solvent contents (MSC's) as follows:

(1) For use as seal coats, the MSC shall be 3%;

(2) For use as chip seals when dusty or dirty aggregate is used, the MSC shall be 3% ;

(3) For use as seat coats or chip seals when good particle coating cannot be attained with emulsions containing 3% or less solvent, by weight, when tested according to the American Society for Testing Materials (ASTM) D-244-89 "Standard Test Methods for Emulsified Asphalts", Coatability Test, Sections 52 through 57, by the New Hampshire department of transportation (NHDOT) or an independently owned laboratory designated by the NHDOT, the MSC shall be 5% ;

(4) For use as mixing with open graded aggregate that is not well washed, the MSC shall be 8% ; or

(5) For use as mixing with dense graded aggregate, the MSC shall be 12%.

(f) As an alternative to the control techniques specified in (c) and (e), above, whichever is applicable, cutback and emulsified asphalt paving operations meeting the applicability criteria of this section may satisfy the requirements of this section by:

(1) Complying with the RACT order provisions of this part; or

(2) Implementing (an) equivalent substitute control technique(s) in accordance with the procedures described in this part.

Env-A 1204.26 Applicability Criteria and Compliance Standards for Solvent Metal Cleaning.

(a) Any source whose solvent metal cleaning operations have combined actual emissions of 5 tons or more of non-exempt VOCs during any consecutive 12-month period after December 31, 1989 shall be subject to the provisions of this section.

(b) For the purpose of this section, following definitions shall apply:

(1) "Freeboard height" means:

a. For a cold cleaner, the distance from the liquid solvent level in the degreaser tank to the lip of the tank;

b. For an open top vapor degreaser tank, the distance from the solvent vapor level in the tank during idling to the lip of the tank;

c. For a conveyorized cold degreaser, the distance from the liquid solvent level to the bottom of the entrance or exit opening, whichever is lower; and

d. For a conveyorized vapor degreaser, the distance from the vapor level to the bottom of the entrance or exit opening, whichever is lower.

(2) "Freeboard ratio" means a ratio of the freeboard height to the smallest interior dimension, such as length or width;

(3) "Refrigerated chiller" means a device which is mounted above the water jacket and the primary condenser coils, consisting of secondary coils which carry a refrigerant to provide a chilled air blanket above the solvent vapor to reduce emissions from the degreaser bath.

(c) Batch solvent metal cold cleaning processes shall be controlled using the control techniques, equipment and operating requirements described below:

(1) Control equipment shall include the following:

a. A tank cover that is easily operated with one hand; if the solvent:

1. Has a true vapor pressure greater than 15 mm mercury (0.3 lb/sq. inch) measured at 38°C (l00°F) by the procedures of ASTM D323-89;

2. Is agitated while functional; or

3. Is heated while functional;

b. If the solvent volatility is greater than 4.3 kilopascals (33 millimeters of mercury or 0.6 pounds per square inch) measured at 38°C (l00°F), or if the solvent is heated above 50°C (120°F), one of the following control techniques:

1. An internally mounted drainage device that operates such that parts to be cleaned are enclosed under the cover while draining, except that the drainage device may be external for applications where an internal type cannot fit into the cleaning system;

2. A freeboard height that gives a freeboard ratio greater than or equal to 0.7; or

3. A water cover at least 2.54 cm. (1 in.) deep, where the solvent is insoluble in and heavier than water;

c. If a solvent spray is used, the spay nozzle shall be capable of delivering a cohesive fluid stream, rather than a fine, atomized or shower type spray, operated according to (c)(2)f., below; and

d. A permanent, legible, conspicuous label, summarizing the operating requirements;

(2) Operating requirements shall be as follows:

a. Waste solvent shall be stored only in covered containers;

b. The degreaser cover shall be closed whenever parts in the cleaner are not being handled manually;

c. Cleaned parts shall be drained for at least 15 seconds or until dripping ceases, whichever is longer;

d. Solvent leaks shall be repaired immediately or the degreaser shall be shut down;

e. Drafts across the top of each cold cleaning unit shall be minimized;

f. Where a solvent spray is used, such spraying shall be:

1. Operated at a pressure which does not exceed 10 pounds per square inch as measured at the pump outlet, and as determined by ASTM methods or (an) equivalent method(s) approved by the director in accordance with the procedures of Env-A 807.01; and

2. Performed only within the confines of the degreasing unit.

(d) Open top vapor degreasers shall be controlled using the control system described below:

(1) Control equipment shall consist of the following:

a. A cover that can be opened and closed easily without disturbing the vapor zone. If the open top vapor degreaser is equipped with a lip exhaust, the cover shall be located below the lip exhausting;

b. Safety switches, as follows:

1. Equipment preventing heat input to the sump when the condenser coolant is not circulating or when the liquid solvent level drops down to the height of the sump heater

coils;

2. Equipment preventing spraying outside the vapor level; and

3. Equipment that shuts off the sump heat if the upper vapor level rises above the height or the primary condenser;

c. At least one of the following major control techniques:

1. A powered or mechanically assisted cover if:

(i) The freeboard ratio is greater or equal to 0.75, and

(ii) The degreaser air/vapor interface opening is greater than 1 m^2 (10.8 ft^2);

2. An enclosed design, such as a cover or door which opens only when the dry part is actually entering or exiting the degreaser;

3. A refrigerated chiller that is capable of maintaining the chilled air blanket temperature, measured at the centroid of the degreaser at the coldest point, at no more than 30% of the solvent's boiling point (°F), except for open top vapor degreasers with an air-vapor interface area less than 1 square meter (10.8 square feet); or

4. A carbon adsorption system meeting the requirements of (d)(1)d. , below, except for open top vapor degreasers with an air-vapor interface area less than one square meter (10.8 square feet);

d. All carbon adsorption systems installed pursuant to (d)(1)c.4, above, shall comply with the following operational requirements:

1. Ventilation greater than or equal to 15 m^3/min per m^2 (50 cfm/ft^2) of air/vapor area when cover is open; and

2. Exhausting less than 25 ppm solvent averaged over one complete adsorption cycle or 24 hours, whichever is less;

(2) Operating requirements shall be as follows:

a. The cover shall be kept closed at all times except when processing work through the degreaser;

b. Solvent carry-out shall be minimized by using the following measures:

1. Racking parts to allow full drainage;

2. Moving parts in and out of the degreaser at less than 3.3 m/min (11 ft/min);

3. Degreasing the work load in the vapor zone at least 30 seconds or until condensation ceases, whichever is longer;

4. Tipping out any pools of solvent on the cleaned parts before removal; and

5. Allowing parts to dry within the freeboard zone of the degreaser for at least 15 seconds or until visually dry, whichever is longer;

c. The unit shall not be used to degrease porous or absorbent materials, such as cloth, leather, wood or rope;

d. Work loads shall not occupy more than half of the degreaser's open top area;

e. The degreaser shall not be loaded to the point where the vapor level would drop more than 10 centimeters (4 inches) when the workload is removed from the vapor zone;

f. No spraying shall occur above the vapor level;

g. Solvent leaks shall be repaired immediately, or the degreaser shall be shut down;

h. The evaporation of waste solvent into the ambient air shall not exceed 20% of the weight of the waste during the process of:

1. Disposing of the waste solvent; or

2. Transferring the waste solvent to another person;

i. Waste solvent shall be stored only in closed containers;

j Exhaust ventilation shall not exceed 20 m^3/min per m^2 (65 cfm per ft^2) of degreaser open area, unless necessary to meet OSHA requirements;

k. Drafts shall be minimized across the top of each degreasing unit such that whenever the cover is open, the unit is not exposed to

drafts greater than 40 meters (131 feet) per minute, as measured between 1 and 2 meters (3.3 and 6.6 feet) upwind and at the same elevation at the tank lip;

l. Draft velocity shall be determined by the testing method prescribed in 40 CFR Part 60, Appendix A, Methods 1-4; and

m. Water shall not be visually detectable in solvent exiting the water separator; and

(3) A permanent label, summarizing operating requirements listed in (d)(2), above, shall be conspicuously displayed.

(e) Conveyorized degreasers shall be controlled using the control system described below:

(1) Control equipment shall consist of the following:

a. The degreaser shall be controlled by one of the following major control techniques:

1. Refrigerated chiller, except for conveyorized degreasers with an air/vapor interface area less than 2.0 square meters (21.6 sq. ft.);

2. Carbon adsorption system meeting the operational requirements of (e)(2)j., below, except for conveyorized degreasers with an air/vapor interface area less than 2.0 square meters (21.6 sq. ft.);

b. A drying tunnel, or another means to prevent cleaned parts from carrying out solvent liquid or vapor, such as rotating or tumbling basket.

c. Safety switches, as follows:

1. Equipment preventing heat input to the sump when the liquid solvent level drops down to the height of the sump heater coils or the condenser coolant is not circulating;

2. Equipment preventing spraying outside the vapor level; and

3. A vapor level control thermostat which shuts off the sump heat if the vapor level rises above the height of the primary condenser;

d. Entrances and exits shall silhouette work loads so that the

average clearance between parts and the edge of the degreaser opening is either less than 10 cm (4 in.) or less than 10% of the width of the opening; and

e. Covers shall be provided for closing off the entrance and exit during shut-down hours.

(2) Operating Requirements shall be as follows:

a. Exhaust ventilation shall not exceed 20 m^3/min per m^2 (65 cfm per ft^2) of degreaser open area, unless necessary to meet OSHA requirements.

b. Drafts shall be minimized across the top of each degreasing unit such that whenever the cover is open, the unit is not exposed to drafts greater than 40 meters per minute, as measured between 1 and 2 meters upwind and at the same elevation at the tank lip.

c. Draft velocity shall be determined by the testing method prescribed in Env-A 803.10;

d. Carry-out emissions shall be minimized by:

1. Racking parts for best drainage; and

2. Maintaining vertical conveyor speed at less than 3.3 m/min (11 ft/min);

e. The evaporation of waste solvent into the ambient air shall not exceed 20% of the weight of the waste during the process of:

1. Disposing of the waste solvent; or

2. Transferring the waste solvent to another person;

f. Waste solvent shall be stored only in covered containers;

g. Solvent leaks shall be repaired immediately, or the degreaser shall be shut down;

h. Water shall not be visibly detectable in the solvent exiting the water separator; and

i. Down-time covers shall:

1. Be placed over entrances and exits of conveyorized degreasers immediately after the conveyor and exhaust are shutdown; and

2. Be removed just before the conveyor and exhaust are started up.

j. All carbon adsorption systems installed pursuant to (e)(1)a.2, above, shall be subject to the following requirements:

1. Ventilation greater than or equal to 15 m^3/min per m^2 (50 cfm/ft^2) of air/vapor interface area when down-time covers are open; and

2. Exhausting less than 25 ppm of solvent by volume averaged over the length of one complete adsorption cycle or 24 hours, whichever is less.

(f) As an alternative to the control system options specified in (c), (d) or (e) above, whichever is applicable, solvent metal cleaning operations meeting the applicability criteria of this section may satisfy the requirements of this section by:

(1) Complying with the RACT order provisions of this part; or

(2) Implementing (an) equivalent substitute control technique(s) in accordance with the procedures described in this part.

Env-A 1204.27 Applicability Criteria and Compliance Options for Miscellaneous and Multicategory Stationary VOC Sources.

(a) Any miscellaneous or multicategory stationary VOC source whose combined TPEs for all processes and devices equal or exceed 50 tons of VOC in any consecutive 12-month period at any time after December 31, 1989, shall be subject to this section, except as specified in (b), below:

(b) The following processes and devices are exempt from the provisions of this section:

(1) VOC-emitting processes and devices that are subject to regulation under 40 CFR 61 or 40 CFR 63, in accordance with Env-A 600, subject to the provisions of (c), below;

(2) VOC-emitting processes and devices that have been determined to be achieving Best Available Control Technology (BACT) for VOC or the Lowest Achievable Emission Rate (LAER) for VOC imposed in a enforceable permit or license, which contains specific emission limitations and/or work practice standards for all affected VOC-emitting processes and devices and issued pursuant to federally enforceable permitting regulations approved or promulgated by the EPA;

(3) VOC-emitting processes and devices that have been determined to be

achieving RACT pursuant to a federally enforceable regulation or federally enforceable permit approved by the EPA;

(4) Incomplete combustion, except where material is heated, burned, combusted or otherwise chemically changed under oxygen-deficient conditions by design;

(5)VOC emissions from non-core activities, as listed in Env-A 1204.03;

(6) VOC emissions from minor core activities having aggregate total actual non-exempt VOC emissions of not more than 5 tons per year; and

(7) Testing and research activities excluded under Env-A 1204.02(e).

(c) VOC-emitting processes and devices unless a prior extension of compliance as provided in 40 CFR 63, Subpart D, has been granted, provided that the total non-exempt VOC emissions to the atmosphere from such equipment are reduced, on a daily basis, to a percentage equal to or greater than the percentage of hazardous air pollutants, excluding particulate matter hazardous air pollutants, required to be reduced in the applicable subpart under 40 CFR 61 or 40 CFR 63;

(d) VOC emissions from miscellaneous or multicategory stationary VOC sources meeting the applicability criteria in (a), above, and not explicitly exempted by this section shall be controlled using one of the following control options:

(1) For the purpose of this paragraph, the following definitions shall apply:

a. "Facility-wide uncontrolled emissions" means all uncontrolled VOC emissions from non-exempt core devices and processes under maximum design conditions;

b. "Facility-wide controlled emissions" means the sum of the controlled emissions from all VOC-emitting devices and processes utilizing (a) capture and control system(s).

(2) Control option 1 shall consist of the installation and operation of capture and control systems that result in facility-wide reduction in the actual uncontrolled VOC emission rate to the atmosphere, calculated on a daily basis, of at least 81%, as determined by dividing the difference between the facility-wide uncontrolled emissions and the facility-wide controlled emissions by the facility-wide uncontrolled emissions.

(3) Control option 2 shall consist of a program to reduce VOC use and emissions that is implemented such that the actual VOC emission rate does not exceed 20% of the actual VOC emission rate in calendar year 1990, or alternative year approved by the director in accordance with the procedures of (h), below, calculated on either:

a. A mass of VOC per mass of solids basis if the affected VOC-emitting process(es) or device(s) applies surface coatings; or

b. A mass of VOC per unit of production basis;

(4) Control option 3 shall be applicable only to the unclassifiable coating processes of RACT-applicable multicategory or miscellaneous stationary VOC sources and shall consist of:

a. Limiting the daily weighted average non-exempt VOC emission rate from any unclassifiable coating process or device to 0.40 kg VOC/l (3.5 lb VOC/gallon) of coating, as applied, excluding water and exempt compounds, as calculated using the procedure described in Env-A 803.03; and

b. Complying with the provisions of (d)(2), (3), (5), or (6) of this paragraph, where applicable, for the unclassifiable non-coating and classifiable components of said source;

(5) Control option 4 shall be applicable only to the classifiable components of RACT-applicable multicategory stationary VOC sources and shall consist of:

a. Complying with the provision(s) in Env-A 1204.09 through Env-A 1204.26 for each classifiable component of a multicategory source, whichever provision(s) are relevant, irrespective of whether said component meets the relevant applicability criteria for the relevant classifiable category;

b. Complying with the provision(s) of (d)(2), (3), (4), or (6), of this paragraph, where applicable, for the unclassifiable components of said source;

c. Complying with the applicable provisions of Env-A 1204.09 through Env-A 1204.26, regardless of the option in this paragraph chosen by the source owner or operator, for all RACT-applicable classifiable components of said source; and

(6) Control option 5 shall consist of the implementation of a division and EPA-approvable plan, issued as a RACT order, pursuant to the provisions of Env-A 1204.05.

(e) VOC emissions from RACT-applicable classifiable processes or devices at miscellaneous stationary VOC sources meeting the applicability criteria of this section shall be subject to the control requirements of the particular sections of this part pertaining to the appropriate classifiable process(es) or device(s) .

(f) VOC emissions from RACT-applicable classifiable processes or devices at

multicategory stationary VOC sources adopting control option 4 shall be subject to the control requirements of the particular section(s) of this part pertaining to the appropriate classifiable process(es) or device(s).

(g) In accordance with the timeframe provided in Env-A 1204.28 and in addition to the information required by Env-A 1204.28, the following documentation shall be submitted to the division by the owner or operator of all applicable sources subject to the requirements of (d), above, regardless of the control option selected:

(1) An inventory of all VOC-emitting processes or devices at the source;

(2) An inventory of all VOC-emitting processes or devices at the source not exempt under the applicable provisions of Env-A 1204.02;

(3) The maximum capacity of each affected VOC-emitting process or device at the source not exempt under the applicable provisions of Env-A 1204.02 to emit VOCs; and

(4) The daily average of actual non-exempt VOCs emitted, based on solvent throughput or units of production, for each RACT-applicable VOC-emitting process or device at the source for the following time periods:

a. Calendar year 1990, or alternative calendar year or consecutive 12-month period approved by the director in accordance with (h), below; and

b. The ozone season of calendar year 1990, or alternative calendar year approved by the director in accordance with (h), below.

(h) The director shall approve an alternative time period pursuant to (d)(1) and/or (g)(4), above, for which the source provides a demonstration that the applicable time periods specified therein are unrepresentative of the operation of the facility due to one or more of the following reasons:

(1) Add-on controls were installed during the calendar year 1990, or during the 1990 ozone season, whichever is applicable, that resulted in non-exempt VOC emission rate reductions of 40% or more of the average emission rate during the applicable time period immediately preceding the specified time period;

(2) Process or product changes were implemented during the calendar year 1990, or during the 1990 ozone season, whichever is applicable, that resulted in non-exempt VOC emission rate reductions of 40% or more of the average emission rate during the applicable time period immediately preceding the specified time period; or

(3) The facility was not in existence or the applicable VOC-emitting processes or devices were not operational during any portion of calendar year 1990, or during any portion of the 1990 ozone season, whichever is applicable; or

(4) The facility provides other adequate demonstration that the 1990 calendar year, or the 1990 ozone season, whichever is applicable, was unrepresentative of VOC-emitting facility operations.

(i) Owners or operators of sources that adopt control option 1 shall submit to the division, in addition to the documentation required in (g), above, a detailed description of the capture and control system proposed.

(j) Owners or operators of sources that adopt control option 2 shall submit the following to the division:

(1) A calculation of the daily weighted average amount of non-exempt VOCs emitted to the atmosphere each day during which the facility or VOC-emitting process or device operated, stated in terms of either:

a. A mass of VOC emitted per quantity of solids basis, or

b. A mass of VOC emitted on a per unit of production basis; and

(2) A calculation or the average amount or non-exempt VOCs anticipated to be emitted to the atmosphere each day during which the VOC-emitting process(es) or device(s) operates upon implementation of control option 1, stated in terms of either:

a. A mass of VOC emitted per quantity of solids basis, or

b. A mass of VOC emitted on a per unit of production basis.

(k) Owners or operators of sources that adopt control option 3 shall submit to the division a calculation of the daily weighted average amount of non-exempt VOCs anticipated to be emitted to the atmosphere each day during which VOC-emitting process(es) or device(s) operate(s) upon implementation of said control option. Said daily weighted average VOC shall be stated in terms of a mass of VOC emitted per quantity of liquid coating, as applied and calculated in accordance with the procedure described in Env-A 803.03.

(1) Owners or operators of sources that adopt control option 5 shall submit to the division documentation pursuant to the RACT order process, as specified in Env-A 1204.05(c) and (d).

Env-A 1204.28 Compliance Plan.

(a) A VOC source meeting any of the RACT applicability criteria specified in

Env-A 1204.09 through Env-A 1204.27 and not explicitly exempted by Env-A 1204.02 shall comply with the applicable emission rate, non-exempt VOC content limits, control technology, or operation and maintenance requirements of this part, including such requirements that are contained in a RACT order, where applicable, issued by the division and approved by EPA, by the deadline specified in the federal Clean Air Act, Section 182(b)(2).

(b) Applicable facilities that have not met the requirements of this part by the date specified in (a), above, shall be in violation or the federal Clean Air Act.

(c) Facilities operating any process subject to the requirements of this part but who were not subject to these requirements prior to March 17, 1995 shall develop a plan for bringing the affected process into compliance with this part by the deadline specified in (a), above.

(d) The compliance plan submitted pursuant to (c), above, shall show:

(1) The technique by which compliance shall be achieved, and

(2) The major increments of progress toward compliance, including:

a. Completion of engineering;

b. Awarding of contract;

c. Initiation of construction;

d. Completion of construction; and

e. Final compliance with emission or control requirements of this part.

(e) Facilities that have not submitted compliance plans prior to the effective date of this rule shall submit such plans to the division within 30 days of the effective date of this rule.

(f) The division shall approve each plan or request additional information, as necessary.

(g) For sources which are subject to this part with combined TPEs of less than 100 tons per year of non-exempt VOCs in the following process or industrial categories, the effective date shall be September 15, 1995:

(1) Metal can coating;

(2) Paper, fabric, film and foil coating;

(3) Vinyl and urethane substrate coating;

(4) Metal furniture coating;

(5) Magnet wire insulation coating;

(6) Fixed roof tank VOL storage;

(7) External floating roof tank VOL storage;

(7) Bulk gasoline loading terminals;

(8) Petroleum refineries;

(9) Solvent metal cleaning;

(10) Miscellaneous metal parts and products;

(11) Rotogravure and flexographic processes;

(12) Plastic parts coating;

(13) Wood furniture and burial casket coating;

(14) Offset lithography;

(15) Metal coil coating;

(16) Bulk gasoline plants; and

(17) Miscellaneous and multicategory sources.

(h) The division shall evaluate all compliance plans and approve those plans which provide for meeting the requirements of this part as expeditiously as practicable.

(i) The effective date of this rule for cutback asphalt applications was July 1, 1979.

(j) The effective date or this rule for sources in the categories listed below having combined potential to emit of 100 tons per year or more of non-exempt VOCs was July 1, 1979:

(1) Coating of metal cans:

(2) Coating of paper, fabric, film and foil

(3) Coating of vinyl and urethane substrates;

(4) Coating of metal furniture;

(5) Magnetic wire insulation coating;

(6) Fixed roof tank VOL storage;

(7) Bulk gasoline loading terminals;

(8) Cutback and emulsified asphalt;

(9) Solvent metal cleaning; and

(10) Petroleum refineries.

(k) The effective date of this rule for sources in the categories listed below having combined potential to emit of 100 tons per year or more of non-exempt VOCs was July 1, 1981:

(l) Miscellaneous metal parts and products; and

(2) Rotogravure and flexographic processes, excluding specialty printing.

(l) The compliance deadline for cutback asphalt and stationary sources with the combined potential to emit of 100 tons per year or more of non-exempt VOCs was December 31, 1982, unless the source received an extension from the division until July 1, 1985. Such sources operating under permits issued by the division pursuant to this part after July 1, 1979 shall be considered to be in compliance.

Env-A 1205 FERROUS AND NON-FERROUS FOUNDRIES, SMELTERS, AND INVESTMENT CASTING INDUSTRIES

Statutory Authority: RSA 125-C:4, 125-C:6, II, C:11. I, C:12, IV

Env-A 1205.01 Emission Standards for Ferrous Foundries In Operation On or Prior to May 12, 1971. No person shall cause or allow the emission of particulate matter and fumes from any ferrous foundry in operation on or prior to May 12, 1971, which shall exceed those limits specified for "Existing Devices" in Env-A 1205.08.

Env-A 1205.02 Replacement of a Ferrous Foundry Furnace. When it becomes necessary to replace a foundry furnace, with a furnace which is larger, the provisions for "New Devices" in Env-A 1205.08 shall apply upon completion of the replacement.

Env-A 1205.03 Emission Standards for Ferrous Foundries In Operation After May 12, 1971.

(a) Any ferrous foundry placed in operation after May 12, 1971 shall be required to comply with the provisions for "New Devices" in Env-A 1205.08.

(b) After June 15, 1974 no person shall cause, or allow new or modified ferrous

foundries to be operated in such a manner as to discharge or cause the discharge into the ambient air any gases which:

(1) Contain particulate matter in excess of 50 milligrasms per dry standard m^3 , 0.022 grains dscf.

Env-A 1205.04 General Emission Standards for Non-Ferrous Foundries, Smelters, and Investment Casting Industries.

(a) No person shall cause or allow the emission of particulate matter or fumes in any 1 hour period from non-ferrous foundries, smelters or investment casting sources which shall exceed those limits specified in Env-A 1205.08, "New Devices" in operation after February 18, 1972; "Existing Devices" in operation on or prior to February 18, 1972. If any of these facilities emit particulate matter of a toxic nature, these emissions are to be further limited in accordance with Env-A 1205.09.

(b) No person shall cause or allow the emission of gaseous pollutants from non-ferrous foundries, smelters or investment casting facilities which exceed those limits specified in Env-A 1205.10.

Env-A 1205.05 Emission Standards for Secondary Lead Smelters.

(a) For the purposes of this section, "secondary lead smelter" means any source producing lead from lead bearing scrap material by smelting to the metallic form.

(b) On or after June 15, 1974, no person shall operate a new or modified secondary lead smelter in such a manner as to discharge or cause the discharge into the ambient air of any gases from the following facilities.

(1) Blast, cupola, furnaces which contain particulate matter in excess of 50 mg/dscm (0.022 gr/dscf); or exhibit 20% opacity or greater, No. 1 on the Ringelmann Smoke Chart, or greater.

(2) Electric furnaces (pot furnaces) which exhibit 10% opacity or greater.

(c) Where the presence of uncombined water is the only reason for failure to meet the requirements of this section, such failure shall not be a violation of this part.

Env-A 1205.06 Emission Standards for Secondary Brass and Bronze Ingot Production Plants.

(a) For the purposes of this section, "secondary brass and bronze ingot production plants" means any source producing brass or bronze ingots from copper, zinc, tin, lead, or other scrap metals.

(b) On or after June 15, 1974, no person shall operate a new or modified secondary brass and bronze ingot production plant in such a manner as to

discharge or cause the discharge into the ambient air any gases from the following facilities:

(1) Reverbatory furnaces of 1,000 kg, 2,205 lb, or greater production, capacity which contains particulate matter in excess of 50 mg/dscm, 0.022 gr/dscf, or exhibit 20% opacity or greater, No. 1 on the Ringlemann Smoke Chart or greater.

(2) Electric furnaces of 1,000 kg, 2,205 lb, or greater production capacity and/or blast, cupola, furnace of 250 kg/hr, 550 lbs/hr, or greater production capacity which exhibit 10 percent opacity or greater.

(c) Where the presence of uncombined water is the only reason for failure to meet the requirements of this section such failure shall not be a violation of Env-A 1205.

Env-A 1205.07 Permit Requirements. Devices within ferrous and non-ferrours foundries, smelters, investment casting industries operated in the state may be required to have permits as established by the Statewide Permit System in Env-A 600 and may be required to pay the permit fees as established by the Permit Fee System in Env-A 700.

Env-A 1205.08 Table No. 1.

Table 1

Process Weight Rate (lbs/hr)	New Devices Emission Rate (lbs/hr)	Existing Devices Emission Rate (lbs/hr)
50	0.36	0.43
100	0.55	0.68
500	1.53	1.99
1,000	2.58	3.17
5,000	7.58	9.35
10,000	12.0	14.85
20,000	19.2	23.62
60,000	40.0	49.31
80,000	42.5	51.03
120,000	46.3	55.55

160,000	49.0	58.88
200,000	51.2	61.53
1,000,000	69.0	82.75
2,000,000	77.6	93.11

Interpolation of the data in Table 1 for the process weight rates up to 60,000 lbs/hr. shall be accomplished by the use of the equations:

$E = 4.10\ P^{0.67}$ P less than or equal to 30 tons/hr - New Devices

$E = 5.05\ P^{0.67}$ P less than or equal to 30 tons/hr - Existing Devices

Interpolation and extrapolation of the data for process weight rates in excess of 60,000 lbs./hr. shall be accomplished by use of the equations:

$E = 55.0\ P^{0.11}$ - 40 P greater than 30 tons/hr. -New Devices

$E = 66.0\ P^{0.11}$ - 48 P greater than 30 tons/hr. - Existing Devices

Where:

E = Emissions in pounds per hour

P = Process Weight Rate in tons per hour

Env-A 1205-09 Table No. 2.

Table 2
EFFECTS FACTOR FOR PARTICULATE MATTER :

MATERIAL

A. All material not specifically listed here		1.0
B. Elements and their compounds of the basic elements		
(CAS Numbers)		
(7440-36-0)	Antimony	0.9
(7440-38-2)	Arsenic	0.9
(7440-39-3)	Barium	0.9
(7440-43-9)	Cadmium	0.2
(7440-47-3)	Chromium	0.2

(7440-48-4)	Cobalt	0.9
(7440-50-8)	Copper	0.2
(7440-58-6)	Hafnium	0.9
(7439-92-1)	Lead - Lead arsenate	0.3
(7580-67-8)	Lithium hydride	0.04
(7723-14-0)	Phosphorus	0.2
(7782-49-2)	Selenium	0.2
(7740-22-4)	Silver	0.1
(13494-80-9)	Tellurium	0.2
(7440-28-0)	Thallium	0.2
(7440-61-1)	Uranium (soluble)	0.1
(7440-61-1)	Uranium (insoluble)	0.4
(7440-62-2)	Vanadium	0.2
(1314-13-2)	Zinc Oxide	0.8
(1314-22-3)		
(7440-0-41-7)	Beryllium -	Not more than 10 grams of beryllium over a 24-hour period. The operator may elect to meet the ambient air concentration of 0.01 ug/m^3 averaged over a 30-day period and measured in the vicinity of the source.
(7439-97-6)	Mercury	Not more than 2300 grams per 24-hour period. The provisions of this subpart are applicable to those stationary sources which process mercury ore or recover mercury and to those which use mercury cathode cells to produce chlorine gas and alkali metal hydroxide.

C. Mineral material and miscellaneous substances

Silica (crystaline) (CAS-7631-86-9) -	Effects Factor -	0.4
(CAS 1332-21-4) Asbestos -	As specified by the EPA in Vol 38, #66, Federal Register, Friday, April 6, 1973.	

Env-A 1205.10 Table No. 3

Table 3

Limitations on emission of sulfur oxides (as SO_2) from primary non-ferrous smelters are required in accordance with the following equations, for new devices:

Copper (CAS 7440-50-8) Smelters	$Y = 0.2x$
Zinc (CAS 7440-66-6) Smelters	$Y = 0.564x^{0.85}$
Lead (CAS 7439-92-1) Smelters	$Y = 0.98x^{0.77}$

Where :

X = Total sulfur (CAS 7704-34-9) fed to smelter (lb./hr.)
Y = Sulfur dioxide (CAS 7446-09-5) emissions (lb./hr.)

REVISION NOTE:	New Hampshire Document #5446, effective August 17, 1992, adopted a new rule numbered as Part Env-A 1205 (Volatile Organic Compounds (VOC): Gasoline Dispensing Facilities and Gasoline Tank Trucks). The prior New Hampshire rule Env-A 1205 (Ferrous and Non-ferrous Foundries, Smelters, and Investment Casting Industries) was renumbered by New Hampshire Document #5446 as Env-A -1206.

PART Env-A 1205 VOLATILE ORGANIC COMPOUNDS (VOC): GASOLINE DISPENSING FACILITIES AND GASOLINE TANK TRUCKS

1205.01 Purpose. The purpose of this part is to limit emissions of volatile organic compounds (VOC) from gasoline dispensing facilities and gasoline tank trucks.

1205.02 Definitions. For the purposes of this part, the following definitions shall apply:

(a) "CARB certified vapor recovery system" means a vapor recovery system which has been certified by the California State Air Resources Board (CARB) pursuant to Section 41954 of the California Health and Safety Code..

(b) "Gasoline" means motor fuel containing any petroleum distillate where the Reid vapor pressure of the fuel is greater than 4.0 pounds per square inch (psi).

(c) "Delivery vessel" means any truck, trailer, or rail car equipped with a storage tank that is used for the transport of gasoline or vapor to a stationary storage tank at a gasoline dispensing facility, bulk gasoline plant, or bulk gasoline terminal.

(d) "Gasoline dispensing facility" means any stationary facility which dispenses gasoline directly into a fuel tank of a motor vehicle and which includes all necessary equipment for the exclusive use of the facility, such as nozzles, dispensers, pumps, vapor return lines, plumbing and storage tanks.

(e) "Gasoline tank truck" means a delivery tank truck used at bulk gasoline plants; bulk gasoline terminals, or gasoline dispensing facilities that is loading or unloading gasoline or that has loaded or unloaded gasoline on the immediately previous load.

(f) “Leak free” means a liquid leak of no greater than 3 drops per minute while the system is pressurized during the performance of a leak check.

(g) “Lower explosive limit” (LEL) means the concentration of a compound in air below which a flame will not propagate if the mixture is ignited.

(h) “Major modification” means any construction, alterations made to, or work done at a gasoline dispensing facility involving underground piping or underground storage tanks.

(i) “Reid vapor pressure” means the absolute vapor pressure of volatile crude oil and volatile nonviscous petroleum liquids, except liquified petroleum gases, as determined by American Society for Testing and Materials (ASTM), D 323-89.

(j) “Stage I” means gasoline vapor recovery during transfer of gasoline into stationary tanks at gasoline dispensing facilities.

(k) “Stage II” means gasoline vapor recovery during motor vehicle refueling operations from stationary tanks at gasoline dispensing facilities.

(l) “Submerge fill” means the method of filling a delivery vessel or storage tank where product enters within 150 millimeters (mm) (5.9 inches (in)) of the bottom of the delivery or storage vessel. Bottom filling of delivery and storage vessels is included in this definition.

(m) “Submerged fill pipe” means any discharge pipe or nozzle which meets either of the following conditions:

(1) Where the tank is filled from the top, the end of the discharge pipe or nozzle is totally submerged when the liquid level is 15 cm (6 inches) from the bottom of the tank; or

(2) Where the tank is filled from the side, the discharge pipe or nozzle is totally submerged when the liquid level is 18 inches from the bottom of the tank.

(n) “Top off” means to attempt to dispense additional gasoline into a motor vehicle fuel tank after a vapor recovery dispensing nozzle has shut off automatically. The filling of those vehicle tanks which, because of the nature and configuration of the fill pipe, causes premature shut off of the dispensing nozzle, and which are filled only after the seal between the fill pipe and the nozzle is broken, is not considered to be topping off.

(o) “Vapor balance system” means a closed system that allows the transfer or balance of vapors, displaced during the loading or unloading of gasoline, from the tank being loaded to the tank being unloaded.

(p) “Vapor tight” means equipment that allows no loss of vapors. Compliance

with vapor-tight requirements is determined by checking to ensure that the concentration at a potential leak source is not equal to or greater than 100 percent of the lower explosive limit (LEL) when measured with a combustible gas detector, calibrated with propane, at a distance of 2.54 centimeters (cm) (1 inch (in)) from the source.

Env-A 1205.03 Applicability of Stage I Controls.

(a) The following storage tanks located at gasoline dispensing facilities, statewide, shall have Stage I controls as specified in 1205.07:

(1) Storage tanks at gasoline dispensing facilities with an annual throughput of greater than or equal to 120,000 gallons;

(2) All storage tanks at gasoline dispensing facilities, installed prior to November 15, 1992, having a capacity greater than or equal to 1100 gallons.

(3) All storage tanks at gasoline dispensing facilities, installed on or after November 15, 1992, having a capacity greater than or equal to 250 gallons.

(b) If throughput exceeds 120,000 gallons in any 1 year, or if new tanks having a capacity greater than or equal to 250 gallons are installed, Stage I vapor recovery requirements shall apply. Once installed, controls shall not be removed even if a reduction in throughput occurs.

(c) Facilities which are equipped with Stage II vapor recovery shall also be equipped with Stage I vapor recovery.

(d) Gasoline storage tanks with a capacity equal to or greater than 250 gallons at gasoline dispensing facilities, statewide, shall be equipped with a submerged fill pipe.

(e) The burden of proof of eligibility for exemption from this rule shall be on the person requesting such an exemption. Persons, having storage tanks with a capacity of equal to or greater than 250 gallons, seeking an exemption shall maintain adequate records as described in Env-A 1205.15 and make them available to the division on an annual basis and/or upon request.

Env-A 1205.04 Applicability for Tank Trucks. All gasoline tank trucks operating in the state of New Hampshire shall have gasoline vapor control equipment as specified in Env-A 1205.08.

Env-A 1205.05 Tank Gauging and Inspection Exemption. All storage tanks shall be opened for gauging or inspection only when loading or unloading operations are not in progress and provided that such tank is not pressurized and is not left open for more than 5 minutes maximum.

Env-A 1205.06 Applicability of Stage II Controls. For gasoline dispensing facilities in the counties of Hillsborough, Merrimack, Rockingham, and Strafford, the following facilities shall be required to have Stage II controls as specified by Env-A 1205.09:

(a) Facilities with an annual throughput of equal to or greater than 420,000 gallons in the year 1990 or any subsequent year. Once installed, controls shall not be removed even if throughput decreases to less than 420,000 gallons per year. A facility that has a 2 year running average subsequent to 1989 which is below 420,000 gallons per year shall be exempt. Should throughput exceed 420,000 gallons in any subsequent year, this exemption shall no longer apply.

(b) The burden of proof of eligibility for exemption from this rule shall be on the person seeking such an exemption. Each facility, having an annual throughput of equal to or greater than 120,000, seeking an exemption shall submit a written request to the division as described in Env-A 1205.15. Persons seeking such an exemption shall maintain adequate records as described in Env-A 1205.15 and make them available to the division upon request.

Env-A 1205.07 Requirements for Gasoline Dispensing Facilities Subject to Stage I. Except as provided by Env-A 1205.08, facilities subject to Stage I vapor recovery requirements shall comply with all of the following requirements:

(a) No person shall transfer or allow the transfer of gasoline into stationary tanks at a gasoline dispensing facility unless a CARB certified Stage I vapor recovery system is used. All Stage I vapor recovery systems shall be equipped with a submerged fill pipe.

(b) All Stage I vapor recovery systems at gasoline dispensing facilities installed on or after November 15, 1992 shall be CARB certified equipment. All systems shall recover at least 95% of gasoline vapors or the manufacturer's design efficiency, which ever is higher. This standard shall apply to each stationary tank during each bulk gasoline delivery.

(c) All open vent pipes on underground tanks at gasoline dispensing facilities shall be equipped with UL approved pressure relief valves. Pressure relief shall be set between l and 3 inches water column.

(d) Above ground gasoline storage tanks, statewide, shall be equipped with a UL approved pressure relief valve which shall be set to either a pressure within 10% of the maximum allowable working pressure of the tank or at least 25.8 mm Hg (0.5 psig) pressure.

(e) All Stage I vapor recovery equipment shall be maintained, at all times, to be properly operating, as specified by the manufacturer, as of the date of installation.

(f) All Stage I vapor recovery equipment, except UL approved pressure relief valves, shall be maintained to be leak-free and vapor tight.

(g) All Stage I vapor recovery systems shall have devices which prevent the flow of product until vapor recovery equipment is in place and operational; a poppetted drybreak on the vapor return if a dual point system is used or interlock protection mechanism return if a coaxial system is used.

Env-A 1205.08 Requirements for Tank Trucks. Any person subject to vapor recovery requirements for a gasoline tank truck shall comply with all of the following requirements:

(a) No person shall unload gasoline from a tank truck to a gasoline storage tank at a gasoline dispensing facility unless all hoses and equipment in the vapor balance system are compatible with equipment at the gasoline dispensing facility and properly connected, and all hatches on the gasoline tank truck are securely fastened. All vapor recovery equipment shall meet or exceed a requirement of 95% efficiency for capture of gasoline vapors.

(b) All adapters or couplers that attach to the storage tank shall be equipped with closures that seal upon disconnect.

(c) Vapor return hoses, couplers, and adapters used in gasoline delivery shall be vapor tight.

(d) All gasoline tank trucks shall be vapor-tight and have a back pressure that does not exceed 450 mm (18 inches) of water pressure or 150 mm (5.9 inches) of water vacuum during loading and unloading. If a gasoline tank truck does not meet these criteria, it shall be repaired and retested within 15 days.

(e) Both pressure and vacuum testing shall be performed annually in accordance with the NHDES GASOLINE VAPOR RECOVERY TESTING PROCEDURES AND INSPECTION MANUAL.

(f) The hatches on a gasoline tank truck shall be open only during measurement of product level or maintenance.

(g) No person shall deliberately or negligently vent the captured vapors to the atmosphere. Vapors shall be condensed and reused or disposed of by incineration having at least 95% efficiency or by methods at the loading terminal described in Env-A l204.l0(b)(3), (4), and (5).

(h) All vapor recovery equipment shall be maintained, at all times, to be properly operating, as specified by the manufacturer, as of the date of installation.

(i) The division and/or the EPA shall, at any time, monitor a gasoline tank truck to confirm continuing existence of leak tight conditions.

Env-A 1205.09 Requirements for Gasoline Dispensing Facilities Subject to Stage II. Facilities subject to Stage II vapor recovery requirements shall comply with all of the following requirements:

(a) No person shall [not] transfer or allow the transfer of gasoline from stationary tanks into motor vehicle fuel tanks at a gasoline dispensing facility unless a CARB certified Stage II vapor recovery system certified to be at least 95% efficient is used.

(b) All Stage II vapor recovery systems shall be maintained in a manner to insure maximum efficiency of vapor recovery, which shall be the system's design value or 95%, whichever is greater.

(c) All Stage II vapor recovery equipment shall be maintained, at all times, to be operating properly, as specified by the manufacturer, as of the date of installation, and substantially free of defects as specified in the NHDES GASOLINE VAPOR RECOVERY TESTING PROCEDURES AND INSPECTION MANUAL. The owner or operator of the gasoline dispensing facility shall conduct daily self-inspections of the facility. Any equipment having a defect, as defined by the state inspection criteria, must be tagged "Out of Order" by the owner or operator of the gasoline dispensing facility and shall not be used until it has been repaired or replaced.

(d) Any component identified as defective that does not impair the effectiveness of the vapor recovery system shall be repaired or replaced within 7 days.

(e) All Stage II vapor recovery equipment shall be maintained to be leak-free and vapor tight.

(f) Stage II vapor recovery equipment shall not include remote check valves.

Env-A 1205.10 Certification of Equipment. No person shall offer for sale, sell, lease, or install within the state of New Hampshire any Stage I or Stage II vapor recovery equipment unless such equipment is CARB certified.

Env-A 1205.11 Prohibition of Use. Whenever the division determines that a Stage II vapor recovery system, or any component thereof, contains a defect that causes air pollution, as defined by the state inspection criteria stated in the NHDES GASOLINE VAPOR RECOVERY TESTING PROCEDURES AND INSPECTION MANUAL, the inspector shall mark such system or component "Out of Order". No person shall use or permit the use of such marked component or system until it has been repaired, replaced, or adjusted, as necessary. Notice to the division shall be given within 8 hours of repair, replacement or adjustment of component or system, and operation of such has been resumed.

Env-A 1205.12 Posting of Operating Instructions. The operator of each retail facility utilizing a Stage II system shall conspicuously post operating instructions for the system in the gasoline dispensing area. The instructions shall clearly describe how to fuel vehicles correctly with vapor recovery nozzles utilized at the facility, and shall include a warning that topping off could result in spillage or recirculation of gasoline and is prohibited. Additionally, the owner or operator of each gasoline dispensing facility shall post a prominent display of the NHDES telephone number for reporting difficulties with

equipment and equipment malfunctions, in accordance with the instructions provided in the NHDES GASOLINE VAPOR RECOVERY TESTING PROCEDURES AND INSPECTION MANUAL.

Env-A 1205.13 Operating Practices. Gasoline at gasoline dispensing facilities shall not be spilled, discarded in sewers, stored in open containers, or handled in any other manner that would result in evaporation into the atmosphere.

Env-A 1205.14 Removal of Gasoline. No person shall transfer or allow the transfer of gasoline from stationary tanks into gasoline tank trucks unless a vapor recovery system that collects 95% of gasoline vapors is used and is operating properly.

Env-A 1205.15 Request for Exemption From Gasoline Vapor Recovery Controls.

(a) Any gasoline dispensing facility desiring exempt status under the provisions of Env-A 1205.03, for those facilities having storage tanks with a capacity of equal to or greater than 250 gallons, and Env-A 1205.06, for those facilities having an annual throughput of equal to or greater than 120,000 shall submit a written request to the division no later than May 1, 1993.

(b) The request shall include the following information:

(1) Name and location of the facility;

(2) Name, address, and signature of the owner;

(3) Proof of throughput less than 420,000 per year; and

(4) Names of all distributors from whom purchases were made.

(c) The director shall review the information submitted. If the information specified in (b), above, is complete and meets the requirements of Env-A 1205.06 the division shall grant the request within 60 days of receipt of the required information and shall notify the facility of the decision.

(d) If an exemption is granted, the gasoline dispensing facility shall submit an annual report to the division of its throughput.

(e) Additional information shall be requested by the division if the information submitted is not sufficient to determine whether a request should be granted or denied.

Env-A 1205.16 Requirements for Notification Prior to Installation or Major Modification.

(a) All gasoline dispensing facilities shall notify the division, in writing, at least 60 days prior to construction, installation of, or major modification to Stage I or Stage II controls.

(b) Such notification shall be submitted to the division on a NHDES-approved form and shall include the following:

(1) Name and location of the facility;

(2) Owner's name, address, and signature;

(3) Throughput of facility;

(4) Type of equipment;

(5) Date construction, installation or major modification is scheduled to begin;

(6) Anticipated completion date;

(7) Notification fee as required by Env-A 1205.21

(c) The division shall respond to such notification within 30 days if the notification does not meet the requirements as set forth in Env-A 1205.07, Env-A 1205.08 or Env-A 1205.09.

(d) Additional information shall be requested by the division if the information submitted is not sufficient to determine the effectiveness and design of the equipment and underground pipes.

Env-A 1205.17 Certification of Compliance of New Installations.

(a) Any person who installs, or performs major modification to, Stage II vapor recovery equipment shall perform certification testing, as provided in Env-A 1205.19, for the Stage II vapor recovery system to demonstrate compliance with the requirements of dynamic backpressure, leak tightness, and liquid blockage tests.

(b) Each facility shall notify the division, in writing, at least 10 working days prior to all certification testing, of the date and time such testing shall occur and what party will conduct the testing. Testing shall be conducted after the system is fully installed and in operating condition. The division shall witness the testing if staff is available at the time such testing occurs.

(c) Each facility shall provide written notification of compliance including the results of the dynamic pressure test, the leak tight test, and liquid blockage test, to the division, as soon as equipment is operational and on or before the respective compliance date for vapor controls.

Env-A 1205.18 Retesting of In-Use Installations. Upon inspection of the facility, if the system does not meet the requirements of vapor recovery as stated in the NHDES GASOLINE VAPOR RECOVERY TESTING PROCEDURES AND INSPECTION

MANUAL, certification testing shall be performed upon written notification from the division.

Env-A 1205.19 Testing Requirements. Initial installation testing requirements for this part as required in Env-A 1205.17 shall be as stated in the NHDES GASOLINE VAPOR RECOVERY TESTING PROCEDURES AND INSPECTION MANUAL. Maintenance requirements shall be per NHDES GASOLINE VAPOR RECOVERY TESTING PROCEDURES AND INSPECTION MANUAL.

Env-A 1205.20 Recordkeeping and Monitoring Requirements.

(a) All gasoline dispensing facilities subject to this part shall maintain:

(1) on site, the means to provide access to any and all components as necessary to determine compliance with the provisions of this part. Access shall be furnished to the division and/or the EPA upon request.

(2) the following records, on the premises, for the length of time specified:

a. Record of installation, indefinitely;

b. All information pertinent to the proper installation, operation and use of gasoline vapor recovery equipment and NHDES procedures, indefinitely;

c. The quantity of all gasoline delivered to the site, for the recent 3 years;

d. All information pertinent to equipment failures, repairs, and maintenance, for the most recent 3 years;

e. Notification of compliance including the most recent results of the dynamic pressure test, the leak test, and liquid blockage test, indefinitely; and

f. All NHDES correspondence including evidence of payment of notification, enforcement and renewal fees, for the most recent 3 years.

(3) Access shall be furnished to the division and/or the EPA upon request.

(b) The owner or operator of any tank truck subject to this part shall maintain the following records:

(1) Documentation, including all of the information required under 40 CFR 60.505, that a gasoline tank truck has met the specifications of Method 27 of 40 CFR Part 60, Appendix A, shall be carried on the tank truck at all times.

(2) Test results for both the pressure and vacuum tests shall be carried on the tank truck at all times.

(3) Testing shall be performed annually in accordance with the NHDES GASOLINE VAPOR RECOVERY TESTING PROCEDURES AND INSPECTION MANUAL, and proof of compliance and the date of test shall be displayed near the Department of Transportation Certification plate required by 49 CFR l78.340-l0b. The State of New Hampshire shall accept the testing of tank trucks conducted by neighboring states.

Env-A 1205.21 Notification. Certification and Renewal Fees.

(a) For Stage I, a nonrefundable fee of $75 shall accompany the submittal of each notification to the division as required by Env-A 1205.16 for installation of or major modification to a Stage I vapor recovery system at a gasoline dispensing facility. This fee shall be waived for facilities that are also required to install a Stage II vapor recovery system.

(b) For Stage II, a nonrefundable fee of $200 shall accompany the submittal of each notification to the division as required by Env-A 1205.16 for the installation of or major modification to a Stage II vapor recovery system at a gasoline dispensing facility.

(c) On or before each third anniversary of the notification for installation of or major modification to a Stage II vapor recovery system, a fee equal to the sum as specified in (b), above, shall be paid by the gasoline dispensing facility to the division. The division shall notify each facility of the fee requirement prior to each due date.

Env-A 1205.22 Compliance Schedule. Facilities required to install Stage I and Stage II gasoline vapor controls as provided by Env-A 1205.03, Env-A 1205.04, or Env-A 1205.06 shall not operate without said controls after the following dates:

(a) May 1, 1993 for any facility which began construction or major modification after November 15, 1990;

(b) May 1,1993 for all tank trucks;

(c) November 1, 1993 for any facility with an average throughput exceeding 100,000 gallons per month;

(d) November 1, 1994 for all remaining facilities; and

(e) 1 year after the date of determination of applicability due to an increase in throughput.

Env-A 1205.23 NHDES Vapor Recovery Training Manual. All gasoline dispensing facilities shall maintain a copy of the NHDES GASOLINE VAPOR RECOVERY

TESTING PROCEDURES AND INSPECTION MANUAL on site. This manual shall be used as a training manual and self-inspection guide, and shall be made available to all employees.

Part Env-A 1206 PULP AND PAPER INDUSTRY

Statutory Authority: RSA 125-C:4; RSA 125-C:6, II

Env-A 1206.01 Particulate Matter Emission Standards for Kraft Mills.

(a) No person shall cause or allow the emission of particulate matter from kraft mill recovery furnace stacks in excess of 1.8 kilograms per ton, 4 pounds per ton, of air dried pulp.

(b) No person shall cause or allow the emission of particulate matter from kraft mill lime kilns in excess of 0.45 kilograms per ton, 1 pound per ton, of air dried pulp.

(c) No person shall cause or allow the emissions of particulate matter from kraft mill smelt tanks in excess of 0.23 kilograms per ton, l-half pound per ton, of air dried pulp.

Env-A 1206.02 Particulate Matter Emission Standard for Sulfite Mills. No person shall cause or allow the emission of particulate matter from sulfite mills in excess of those limits specified in Env-A 1206.06. Particulate matter emissions from fuel burning devices as sulfite mills are regulated by Env-A 1202.

* * *

Env-A 1206.04 Emission Standard for Paper Manufacturing. No person shall cause or allow the emission of particulate matter from paper manufacturing, as opposed to pulp manufacturing, in excess of the limits specified in Env-A 1206.06.

Env-A 1206.05 Permits Requirements. Devices within pulp and paper plants operated in the state may be required to have permits under Env-A 600 and may be required to pay the permit fees established by the Permit Fee System in Env-A 700.

Env-A 1206.06 Table No. 1.

Table 1		
Process Weight Rate (lbs/hr)	Devices Installed after Feb. 18, 1972 Emission Rate (lbs/hr)	Devices Installed on or prior to Feb. 18, 1972 Emission Rate (lbs/hr)
50	0.36	0.43

100	0.55	0.68
500	1.53	1.99
1,000	2.58	3.17
5,000	7.58	9.35
10,000	12.0	14.85
20,000	19.2	23.62
60,000	40.0	49.31
80,000	42.5	51.03
120,000	46.3	55.55
160,000	49.0	58.88
200,000	51.2	61.53
1,000,000	69.0	82.75
2,000,000	77.6	93.11

Interpolation of the data in Table 1 for the process weight rates up to 60,000 lbs./hr. shall be accomplished by the use of the equations:

$E = 4.10\ P^{0.67}$ P less than or equal to 30 tons/hr - Devices Installed after Feb. 18, 1972.

$E = 5.05\ P^{0.67}$ P less than or equal to 30 tons/hr - Devices or on Prior to Feb. 18, 1972.

Interpolation and extrapolation of the data for process weight rates in excess of 60,000 lbs./hr. shall be accomplished by use of the equations:

$E = 55.0\ P^{0.11}$ - 40 P greater than 30 tons/hr - Devices Installed after Feb. 18, 1972.

$E = 66.0\ P^{0.11}$ - 48 P greater than 30 tons/hr -Devices Installed on or Prior to Feb. 18, 1972.

Where:

E = Emissions in pounds per hour

P = Process Weight Rate in tons per hour

PART Env-A 1207 ASPHALT PLANTS

Statutory Authority: RSA 125-C:4; RSA 125-C:6, II

Env-A 1207.01 Asphalt Plant Defined. For the purposes of this section, "asphalt plant" means Any asphaltic hot mix plant including all equipment utilized in the manufacture of asphaltic hot mix concrete such as burners, dryers, elevators, screens, mixers, weighing equipment, bins, and air pollution control equipment.

Env-A 1207.02 Visible Emission Standards.

(a) No person shall cause or allow the emission of smoke into the ambient air from any fuel burning devices operated in conjunction with an asphalt plant in excess of 20 percent opacity, darker in shade or appearance than that designated as No. 1 on the Ringlemann Smoke Chart.

(b) Env-A 1207.02(a) shall not apply to smoke emitted by plants existing prior to June 1, 1974 during the starting operation and 60 percent opacity, No. 3 on the Ringelmann Smoke Chart, or less shall be permitted for a period not to exceed 3 minutes per startup.

Env-A 1207.03 Particulate Matter Emission Standards from Asphalt Plants In 0peration On or Prior to June 15, 1974. No person shall cause or allow particulate matter emissions from a plant into the ambient air in excess of the quantities listed in the following table:

Aggregate Process Rate Pounds per Hour	Stack Emission Rate Pounds per Hour
10,000	10
20,000	16
30,000	22
40,000	28
50,000	31
100,000	33
200,000	37
300,000	40
400,000	43
500,000 and above	47

For a process weight between any 2 consecutive process weights stated in this table, the emission limitation shall be determined by interpolation.

Env-A 1207.04 Particulate Matter Emission Standards from Asphalt Plants In Operation After June 15, 1974. No person shall cause or allow the operation of a plant in such a manner as to:

(a) Emit particulate matter in excess of 90 milligrams per dry normal cubic meter, 0.04 gr/dscf;

(b) Exhibit 20% opacity or greater, No. 1 on the Ringelmann Smoke Chart;

(c) Where the presence of uncombined water is the only reason for failure to meet the requirements of this section, such failure shall not be a violation of this Part Env-A 1207.

Env-A 1207.05 Total Emission Measured. When a plant is equipped with more than 1 stack the emission rate shall be based on the total emissions from all stacks.

Env-A 1207.06 Fugitive Emission Control System Required. No person shall cause or allow a plant to operate that is not equipped with a fugitive emission control system operated and maintained in such a manner as to prevent the emission of particulate matter from any point other than the stack outlet. Overflow chutes shall be exempt from this section.

Env-A 1207.07 Fugitive Dust Control Within Plant Premise. The plant owner or operator shall control the fugitive dust from vehicular movement over access roads to, from, and within the plant premises by means such as paving, oiling, or wetting. Good operating practices shall be maintained at all times relative to stockpiling, screen changing, and general maintenance.

Env-A 1207.08 Data Requested by Division. At such time as the division may request, the person owning or operating the plant shall submit all data on type, sizing, and quantity of the aggregates used, and hours of plant operation.

Env-A 1207.09 Permit Requirements.

Statutory Authority: RSA 125-C:11, I; RSA 125-C:12, IV

(a) Devices within asphalt plants operated in the state may be required to have permits under Env-A 600 and may be required to pay the permit fees as established by the Permit Fee System Env-A 700.

PART Env-A 1208 SAND AND GRAVEL, CEMENT AND CONCRETE INDUSTRIES

Statutory Authority: RSA 125-C:4; RSA 125-C:6, II

Env-A 1208.01 Emission Standard for Sand and Gravel Sources. No person shall cause or allow a sand and gravel source to operate which is not equipped with a fugitive emission control system operated and maintained in such a manner as to control the

emission of particulate matter. Emissions shall be limited to a 20 percent opacity, Ringlemann Smoke Chart No. 1, at crushers, transfer points and screens.

Env-A 1208.02 Emission Standard for Cement and Concrete Sources. No person shall cause or allow the operation of a source for the cement, ready mix concrete, or cement block industry in such a manner as to permit visible emission in excess of 20 percent opacity, No. 1 on the Ringlemann Smoke Chart.

Env-A 1208.03 Emission Standards for Portland Cement Plants.

(a) For the purposes of this section, "Portland Cement Plant" shall include any source manufacturing Portland Cement by either the wet or dry process.

(b) No person shall cause or allow the operation of a Portland Cement Plant in such a manner as to permit particulate emissions in excess of the following:

(1) 0.15 kg per metric ton 0.03 lbs., from the kiln per ton of feed to the kiln 2 hour average;

(2) 0.050 kg per metric ton, 0.10 lbs., from the clinker cooler per ton of feed to the kiln 2 hour average;

(c) There shall be no visible emissions from individual devices within the plant that exceed 10 percent opacity.

Env-A 1208.04 Dust Control Within Source Premises. The source owner or operator shall control the dust from vehicular movement over access roads to, from, and within the source premises by means such as paving, oiling, or wetting. Good operating practices shall be maintained at all times relative to stockpiling, screen changing, and general maintenance.

Env-A 1208.05 Transportation of Scatterable Material On Public Ways. No person shall cause or allow the transportation of scatterable material on any public way unless covered to prevent scattering or eroding be wind, apparent wind, or weather.

Env-A 1208.6 Permit Requirements. Devices within sand and gravel, cement and concrete sources operated in the state may be required to have permits under Env-A 600 and may be required to pay the permit fees as established by the Permit Fee System Env-A 700.

PART Env-A 1211 NITROGEN OXIDES (NOx)

Env-A 1211.01 Definitions. For the purposes of this part, the following definitions shall apply:

(a) "Add-on control" means a device or process used to collect, remove, convert or destroy gaseous NOx pollutants resulting from the combustion of fuel or waste

before these pollutants are released into the ambient air, i.e. post-combustion NOx air pollution control equipment such as selective catalytic reduction.

(b) "Asphalt" means a dark-brown to black cementitious material that is solid, semi-solid or liquid in consistency, in which the primary constituents are bitumens which occur in nature as such or are obtained as residue in refining petroleum.

(c) "Auxiliary boiler" means a boiler operated to provide steam and house heat only when the primary steam or power source for a facility is not available for use. Auxiliary boiler shall not include emergency generators and load shaving units.

(d) "Auxiliary fuel" means fuel, other than waste materials, used in an incinerator or resource recovery facility to attain temperatures sufficiently high enough to dry and ignite waste materials, to maintain ignition, or to drive the complete combustion of combustible solids, vapors and/or gaseous substances.

(e) "Classifiable process or device" means any process or device that emits NOx and is included in one of the categories listed in Env-A 1211.02(a) through (k), but is not subject to the requirements of Env-A 1211.03 through 1211.13 because such process or device falls below the applicability threshold.

(f) "Coal" means all solid fuels classified as anthracite, bituminous, lignite, or subbituminous according to the ASTM Standard Specification for Classification of Coals by Rank, ASTM D 388-77, coal refuse, and petroleum coke. Coal-derived synthetic fuels, including but not limited to, solvent refined coal, gasified coal, coal-oil mixtures, and coal-water mixtures are also included in this definition.

(g) "Cogeneration facility" means a facility that generates steam for the purpose of supplying heat or energy to a manufacturing process in the host facility, and power for sale to an electric utility.

(h) "Coke" means a fused, cellular, porous structure that remains after free moisture and the major portion of the volatile materials have been distilled from bituminous coal and other carbonaceous material by the application of heat in the absence of air or in the presence of a limited supply of air.

(i) "Combined cycle combustion turbine" means any stationary gas or oil-fired turbine which recovers heat from the turbine exhaust gases to heat water or generate steam.

(j) "Commercial fuel" means solid, liquid, or gaseous fuel normally produced or manufactured, and sold for the purpose of creating useful heat or mechanical energy.

(k) "Cyclone firing" means a fuel-firing process using one or more horizontal

cylinders to burn fuel under conditions of high rates of heat release, low rates of heat absorption by the cylinder walls, with centrifugal action imparted to the fuel particles by air entering the cylinder. The combustion gases exiting from the cylinders turn 90 degrees to go up through the boiler. The horizontal cylinders are attached to the bottom of the furnace with one or more of the cylinders arranged on one furnace wall or on 2 opposed furnace walls.

(l) “Distillates of air” means helium (He), nitrogen (N_2) oxygen (O_2), neon (Ne), argon (Ar), krypton (Kr), xenon (Xe), and carbon dioxide (CO_2).

(m) "Dry bottom" means the boiler has a furnace bottom temperature below the ash melting point, and the bottom ash is removed as a solid.

(n) "Electric generating utility" means a utility which is regulated by the Public Utilities Commission and which generates electricity for sale.

(o) "Emergency generator" means a stationary internal combustion engine or stationary combustion turbine which operates as a mechanical or electrical power source only when the primary power source for a facility has been lost during an emergency, such as a power outage and/or during the normal maintenance and testing procedure as recommended by the manufacturer. Emergency generator shall not include a load shaving unit, peaking power production unit, or a standby engine in an energy assistance program.

(p) "Emission unit" means an individual piece of equipment from which any air pollutant is emitted to the ambient air, e.g. an individual boiler.

(q) "Face firing" means a furnace firing design in which the burners are mounted in an array on one or more vertical walls, including:

(1) Opposed firing, where the burners are mounted on 2 opposite walls; and

(2) Single-wall firing, where the burners are mounted on only one wall.

(r) "Fuel-bound nitrogen" means the nitrogen content, in weight fraction, of the fuel.

(s) "Gas or gaseous fuel" means natural gas, or gaseous substances produced synthetically from coal or oil, or derived from the decomposition of organic matter, or derived as a by-product of a manufacturing process, and which can be used to create useful heat and/or mechanical energy.

(t) "Industrial boiler" means a steam generating unit that generates steam to supply power and/or heat to an industrial, institutional or commercial operation, excluding boilers used by electric utilities, small power producers and cogenerators to generate electricity.

(u) "Internal combustion engine" means any engine in which power, produced by heat and/or pressure developed in the engine cylinder(s) by burning a mixture of air and fuel, is subsequently converted to mechanical work by means of one or more pistons.

(v) "Lean burn engine" means a stationary internal combustion engine in which the amount of O_2 in the engine exhaust gases is 1.0% or more, by weight, unless otherwise specified by the engine manufacturer.

(w) "Limited at all times" means that the NOx emissions of a source or device does not exceed the prescribed NOx emission limit over the averaging time specified in the applicable section of this part during the entire period of time that the source or device operates.

(x) "Load shaving unit" means a device used to generate electricity for sale or use during high electric demand days, including but not limited to stationary combustion turbines or stationary internal combustion engines.

(y) "Low-NOx emitting process" means a process that results in NOx emission reductions which constitute NOx RACT as approved by the division and EPA pursuant to Env-A 1211.19.

(z) "Manufacturing process" means any process directly related to the manufacturing of goods and/or supplies, both finished and intermediate, whose operations result in pollutant emissions to the ambient air from process or manufacturing equipment or machinery directly or through exhaust or ventilating systems, including elevated stacks.

(aa) "Maximum allowable emission rate" means the maximum amount of an air contaminant which may be emitted into the ambient air during a prescribed interval of time.

(ab) "Maximum heat input rate" means the maximum steady state fuel firing rate, in Btus per hour of gross heat input, of fuel burning equipment as determined in the design rating of the equipment manufacturer and the characteristics of the fuel-burning devices.

(ac) "Miscellaneous stationary source" means that portion of a stationary source, as defined in Env-A 101.90, consisting of devices and processes that are:

(1) Unclassifiable; and/or

(2) Classifiable.

(ad) "Natural gas" means:

(1) A naturally occurring mixture of hydrocarbon and nonhydrocarbon gases found in geologic formations beneath the earth's surface, of which

the principal constituent is methane; or

(2) Liquid petroleum gas, as defined by the ASTM Standard Specification for Liquid Petroleum Gases, D1835-82.

(ae) "Normalized stoichiometric ratio (NSR)" means the actual mole ratio of urea to NOx divided by the theoretical stoichiometric ratio, which is 0.5 for the reaction between urea and NOx.

(af) "NOx control technique" means a system, design modification, or use of equipment and technology to reduce NOx emissions to the ambient air from NOx-emitting devices or processes, including combustion modifications, low-NOx burners, overfire air systems, low excess air systems, flue gas recirculation, natural gas reburn, burners out of service, fuel switching, selective catalytic reduction, selective non-catalytic reduction, or other device or procedure approved pursuant to Env-A 1211.19.

(ag) "Oxides of nitrogen (NOx)" means all oxides of nitrogen, except nitrous oxide, as measured in accordance with test methods approved by the division and EPA.

(ah) "Ozone season" means the period between May 1 and September 30, inclusive.

(ai) "Power outage" means that normally available sources of electrical energy are unavailable due to circumstances beyond the control of the customer(s) of the power supplier(s).

(aj) "RACT order" means a written order, providing for inventories and emission limits for NOx-emitting devices or processes and RACT-compliance procedures and schedules, issued by the division to a miscellaneous stationary source or a stationary source seeking alternative RACT emission limits pursuant to Env-A 1211.19.

(ak) "Rated brake horsepower (bhp)" means the brake horsepower rating specified by the manufacturer and listed on the nameplate.

(al) "Regenerative cycle combustion turbine" means any stationary gas or oil-fired turbine which recovers heat from the turbine exhaust gases to preheat inlet combustion air to the turbine.

(am) "Repowering" means the replacement or conversion of an existing emissions unit with a new or converted unit which results in lower emission rates of NOx. This definition also includes the meaning contained in section 402 of the Clean Air Act Amendments of 1990 and generally means the replacement of an existing boiler with a technology capable of controlling multiple combustion emissions simultaneously with improved boiler or generation efficiency and with significant greater waste reduction relative to the performance of technology in widespread

commercial use as of November 15, 1990.

(an) "Rich burn engine" means any stationary internal combustion engine that is not a lean burn engine.

(ao) "Simple cycle combustion turbine" means any stationary gas or oil-fired turbine which does not recover heat from the turbine exhaust gases to preheat the inlet combustion air to the turbine, heat water or generate steam.

(ap) "Shaker grate or vibrating grate" means a grate that mechanically oscillates or vibrates during loading of solid fuel to assist in the introduction of the fuel into the combustion zone, and in removing accumulation of fuel particle deposits on the grate surface.

(aq) "Small power production facility" means a power production facility that is designed for or capable of operating at a capacity of less than 30 megawatts and is not a cogeneration facility.

(ar) "Stationary combustion turbine" means any simple cycle combustion turbine, regenerative cycle combustion turbine, or any combustion turbine portion of a combined cycle steam/electric generating system that is not self-propelled, but which may be mounted on a vehicle for portability.

(as) "Stationary grate" means a grate that is permanently affixed during normal boiler operation.

(at) "Stationary internal combustion engine" means any internal combustion engine that operates as a stationary source, but which may be mounted on a vehicle for portability.

(au) "Steam electric boiler" means a steam generating unit, as defined in Env-A 1211.01(av), that is constructed and operated for the purpose of supplying more than one-third of its potential electrical output to any utility power distribution system for sale which is located at a cogeneration or small power production facility.

(av) "Steam generating unit" means a device that combusts any fuel or byproduct/waste to produce steam or to heat water or any other heat transfer medium.

(aw) "Stoker" means a furnace design that incorporates a feeding mechanism, fuel distribution and ash residue collection system for the purpose of introducing solid fuel into the combustion zone of the furnace by feeding the fuel onto a grate.

(ax) "Tangential firing" means a boiler firing design where the burners and air nozzles are mounted in each corner of the furnace chamber where the vertical furnace walls meet. Both the fuel and air are directed from the furnace corners along a line tangential to a circle lying in a horizontal plane of the furnace.

(ay) “Theoretical potential emissions” means the theoretical emissions of NOx that would occur based on either of the following:

(1) 8760 hours per year of continuous operation under maximum design conditions; or

(2) Hours of operation or design or process conditions, including operating rates that are limited by the conditions of a federally enforceable permit issued prior to January 1, 1990.

(az) "Traveling grate" means a grate designed to move at a constant velocity during the loading of solid fuel to assist in the introduction of fuel into the combustion zone.

(ba) "Unclassifiable process or device" means any process or device that emits NOx but is not included in any of the categories listed in Env-A 1211.02(a) through (k).

(bb) "Utility boiler" means a steam generating unit that is constructed and operated for the purpose of supplying more than one-third of its potential electrical output capacity to any utility power distribution system for sale, except for steam electric boilers, as defined in Env-A 1211.01(au).

(bc) "Wet bottom" means the boiler has a furnace bottom temperature above the ash melting point and the bottom ash is removed as a liquid.

Env-A 1211.02 Applicability.

(a) Utility boiler(s) shall be subject to the requirements of Env-A 1211.03 if the combined maximum heat input rate of such boiler(s) exceeds 50,000,000 Btu per hour at any time after December 31, 1989.

(b) Steam electric boilers shall be subject to the requirements of Env-A 1211.04 if the combined maximum heat input rate of such boiler(s) exceeds 50,000,000 Btu per hour at any time after December 31, 1989.

(c) Industrial boiler(s) shall be subject to the requirements of Env-A 1211.05 if the combined maximum heat input rate of such boiler(s) exceeds 50,000,000 Btu per hour at any time after December 31, 1989.

(d) Stationary combustion turbine(s), except for combustion turbines mounted on aircraft and combustion turbines operating as load shaving units or emergency generators, shall be subject to the requirements of Env-A 1211.06 if the combined maximum heat input rate of such turbine(s) exceeds 25,000,000 Btu per hour at any time after December 31, 1989.

(e) Stationary internal combustion engine(s), except for stationary internal combustion engines operating as load shaving units or emergency generators,

shall be subject to the requirements of Env-A 1211.07 if the combined maximum heat input rate of such engine(s) exceeds 4,500,000 Btu per hour at any time after December 31, 1989.

(f) Asphalt plant dryer(s) shall be subject to the requirements of Env-A 1211.08 if the combined maximum heat input rate of such dryer(s) exceeds 26,200,000 Btu per hour at any time after December 31, 1989.

(g) Incinerator(s), except for incinerators combusting sewage sludge, shall be subject to the requirements of Env-A 1211.09 if the combined processing capacity of such incinerator(s) exceeds 85 tons per day or more of waste at any time after December 31, 1989.

(h) Wallboard dryer(s), calcining mill(s), calciner(s), and gypsum rock dryer(s) shall be subject to the requirements of Env-A 1211.10 if the combined theoretical potential emissions of such wallboard dryer(s), calcining mill(s), calciner(s), and gypsum rock dryer(s) equal or exceed 50 tons per calendar year of NOx at any time after December 31, 1989.

(i) Emergency generator(s) shall be subject to the requirements of Env-A 1211.11 if the combined theoretical potential emissions from all devices and processes located at the stationary source exceed 50 tons per calendar year of NOx at any time after December 31, 1989.

(j) Auxiliary boiler(s) shall be subject to the requirements of Env-A 1211.12 if the combined theoretical potential emissions from all devices and processes located at the stationary source exceed 50 tons per calendar year of NOx at any time after December 31, 1989.

(k) Load shaving unit(s) shall be subject to the requirements of Env-A 1211.13 if the combined theoretical potential emissions from all devices and processes located at the stationary source exceed 50 tons per calendar year of NOx at any time after December 31, 1989.

(l) Any miscellaneous stationary source at a stationary source having combined theoretical potential emissions from all devices and/or processes which equal or exceed 50 tons per calendar year of NOx at any time after December 31, 1989 shall be subject to the requirements of Env-A 1211.14, except for NOx-emitting devices that have implemented Best Available Control Technology (BACT) for NOx, or Lowest Achievable Emission Rate (LAER) for NOx at any time after December 31, 1989 pursuant to a federally enforceable permit, issued by the division or by EPA. Any device or group of devices at a stationary source which meet the applicability criteria of Env-A 1211.02(a) through Env-A 1211.02(k) shall be subject to the requirements of the applicable sections.

(m) Any stationary source having combined theoretical potential emissions of 50 tons or more of NOx during any consecutive 12-month period but whose actual NOx emissions have not equaled or exceeded 50 tons during any consecutive 12-

month period since January 1, 1989, shall be subject to the requirements of this part, unless the following requirements are met:

(1) The combined actual NOx emissions from NOx emitting devices or processes are limited to less than 50 tons during any consecutive 12-month period by an enforceable permit or consent decree; and

(2) The source has been and remains in full compliance with the conditions of a permit issued by the division or by EPA, or the terms of any consent decree entered into by the division or by EPA, or any court order; and

(3) The source has submitted the compliance schedule required by Env-A 1211.16.

(n) Once a stationary source becomes subject to the requirements of this part, the source shall remain subject to these requirements even if it later falls below the applicability levels specified in Env-A 1211.02(a) through Env-A 1211.02(l).

(o) If a stationary source fails to comply with any of the terms or conditions of a permit or consent decree, or court order referred to in Env-A 1211.02(m), the source shall immediately become subject to the applicable requirements of this part.

Env-A 1211.03 Emission Standards for Utility Boilers.

(a) All utility boilers meeting the applicability criteria of Env-A 1211.02(a) shall be subject to the provisions of this section.

(b) On and after May 31, 1995 owners or operators of utility boilers with heat input rates of at least 5,000,000 Btu per hour but less than 50,000,000 Btu per hour shall:

(1) Annually, before April 1st of each year:

a. Perform an efficiency test using the test procedures specified in ASME/ANSI Boiler Test Code 4.1; and

b. Adjust the combustion process of the boiler in accordance with the procedures specified in chapter 5, Combustion Efficiency Tables, Taplin, Harry, R., Fairmont Press, 1991; and

(2) Maintain, in a permanently bound log book or other format approved by the director, the following information:

a. The date(s) on which:

i. The efficiency test was conducted; and

ii. The combustion process was last adjusted;

b. The name(s), title, and affiliation of the person(s) who:

i. Conducted the efficiency test; and

ii. Made the adjustments;

c. The NOx emission rate, in ppm after the adjustments are made;

d. The CO emission rate, in ppm after the adjustments are made;

e. The opacity readings; and

f. Any other information required by Env-A 901.06 and Env-A 901.07.

(c) On and after May 31, 1995 each utility boiler with heat input rates of at least 50,000,000 BTU per hour shall comply with NOx RACT emission limits, or install the NOx RACT control technology, specified below:

(1) For wet-bottom boilers firing coal, or any combination of fuels utilizing coal:

a. For tangential or face-fired boilers, 1.0 lb. per million Btu, based on a 24-hour calendar day average; and

b. For cyclone-fired boilers:

1. With a maximum net power output of less than 320 megawatts at all times after December 31, 1989, 0.92 lb. per million Btu based on a 24-hour calendar day average; or

2. With a maximum net power output of more than 320 megawatts at any time after December 31, 1989, comply with the NOx RACT emission limits specified in Env-A 1211.03(d) and either:

ii. 1.40 lb. per million Btu based on a 24-hour calendar day average; or

iii. Install, operate, and maintain selective non-catalytic reduction (SNCR) technology with a minimum normalized stoichiometric ratio (NSR) of 1:1; or

iii. Install, operate, and maintain NOx RACT air

pollution control equipment or an air pollution control process having equivalent or greater NOx removal efficiency as selective non-catalytic reduction (SNCR), approved by the division and EPA.

(2) For dry-bottom boilers firing coal, capable of firing coal, oil, or any combination thereof:

a. For tangential-fired boilers, 0.38 lb. per million Btu, based on a 24-hour calendar day average;

b. For face-fired boilers, 0.50 lb. per million Btu, based on a 24-hour calendar day average; and

c. For stoker-fired boilers, 0.30 lb. per million Btu, based on a 24-hour calendar day average;

(3) For boilers firing oil, capable of firing oil, gas, or any combination thereof:

a. For tangential or face-fired boilers when firing exclusively oil, 0.35 lb. per million Btu, based on a 24-hour calendar day average;

b. For face-fired boilers when firing gas or any combination of oil and gas, 0.25 lb. per million Btu based on a 24-hour calendar day average; and

c. For tangential-fired boilers when firing gas or any combination of oil and gas, 0.25 lb. per million Btu based on a 24-hour calendar day average.

(4) For boilers firing exclusively gas, 0.20 lb. per million Btu, based on an hourly average, for tangential or face-fired boilers.

(5) For boilers firing wood fuel, capable of firing a combination of wood fuel and oil:

a. For boilers equipped with a traveling, shaker, or vibrating grate, 0.33 lb. per million Btu, based on a 24-hour calendar day average; and

b. For boilers equipped with a stationary grate, 0.25 lb. per million Btu, based on a 24-hour calendar day average.

(d) In addition to the requirements of Env-A 1211.03(c)(1)b.2., above, any wet-bottom cyclone-fired boiler with a maximum net power output equal to or greater than 320 megawatts at any time after December 31, 1989 shall meet the following

NOx emission limits in the period May 31, 1995 through May 31, 1999:

(1) During the calendar period June 1 through May 31, NOx emissions shall not exceed 35.4 tons per 24-hour calendar day; and

(2) During the calendar period June 1 through May 31, NOx emissions shall not exceed 12,921 tons.

(e) In the event that the NOx RACT emission limit provided in Env-A 1211.03(d)(2), above, is exceeded prior to the expiration of the specified calendar period, the affected utility boiler shall shut down for all days remaining in the specified calendar period except as provided in a written declaration of an energy emergency by the governor.

(f) The director shall implement Phase II NOx emission limits for wet-bottom cyclone-fired utility boilers subject to Env-A 1211.03(d) no later than May 31, 1999. After that date, wet-bottom cyclone-fired utility boilers shall be limited at all times to the equivalent of the following NOx emission limits:

(1) For boilers firing coal, or any combination of fuels utilizing coal, 3.8 to a maximum of 15.4 tons of NOx per 24-hour calendar day, as determined by the director;

(2) For boilers firing any fuel or combination of fuels excluding coal, 3.8 tons of NOx per 24-hour calendar day.

(g) Nothing in this part shall prohibit the retiring or repowering of a utility boiler at any time after the effective date of this part. Utility boilers shall remain subject to the applicable NOx RACT emission limits specified in this part, regardless of a decision to retire or repower the boiler.

(h) Compliance with the NOx RACT emission standards specified in this section shall be determined by the testing methods specified in Env-A 1211.21 and, if applicable, by a CEM system for NOx required by Env-A 600 or Env-A 1211.22.

(i) The recordkeeping and reporting requirements for utility boilers shall be in accordance with the provisions of Env-A 901.06 and Env-A 909.07, respectively.

Env-A 1211.04 Emission Standards for Steam Electric Boilers.

(a) All steam electric boilers that meet the applicability criteria of Env-A 1211.02(b) shall be subject to the provisions of this section.

(b) On and after May 31, 1995 owners or operators of steam electric boilers with heat input rates of at least 5,000,000 Btu per hour but less than 50,000,000 Btu per hour shall:

(1) Annually, before April 1st of each year:

a. Perform an efficiency test using the test procedures specified in ASME/ANSI Boiler Test Code 4.1; and

b. Adjust the combustion process of the boiler in accordance with the procedures specified in chapter 5, Combustion Efficiency Tables, Taplin, Harry R., Fairmont Press, 1991; and

(2) Maintain, in a permanently bound log book or other format approved by the director, the following information:

a. The date(s) on which:

i. The efficiency test was conducted; and

ii. The combustion process was last adjusted;

b. The name(s), title and affiliation of the person(s) who:

i. Conducted the efficiency test; and

ii. Made the adjustments;

c. The NOx emission rate, in ppm after the adjustments are made;

d. The CO emission rate, in ppm after the adjustments are made;

e. The opacity readings; and

f. Any other information required by Env-A 901.06 and Env-A 901.07.

(c) On and after May 31, 1995 steam electric boilers with heat input rates of at least 50,000,000 Btu per hour but less than 100,000,000 Btu per hour shall comply with the NOx RACT emission limits, or install the NOx RACT control technology, specified in Env-A 1211.05(c), for the applicable fuel type and fuel-firing design.

(d) On or after May 31, 1995 steam electric boilers with heat input rates of 100,000,000 Btu per hour or more shall comply with the NOx RACT emission limits, or install the NOx RACT control technology, specified in Env-A 1211.05(d), for the applicable fuel type and fuel-firing design.

(e) Compliance with the NOx RACT emission standards specified in this section shall be determined by the testing methods specified in Env-A 1211.21 and, if applicable, by a CEM system for NOx required by Env-A 600 or Env-A 1211.22.

(f) The recordkeeping and reporting requirements for steam electric boilers shall be in accordance with the provisions of Env-A 901.06 and Env-A 901.07,

respectively.

Env-A 1211.05 Emission Standards for Industrial Boilers.

(a) All industrial boilers which meet the applicability criteria of Env-A 1211.02(c) shall be subject to the provisions of this section.

(b) On and after May 31, 1995 owners or operators of industrial boilers with heat input rates of at least 5,000,000 Btu per hour but less than 50,000,000 Btu per hour shall:

(1) Annually, before April 1st of each year:

a. Perform an efficiency test using the test procedures specified in ASME/ANSI Boiler Test Code 4.1; and

b. Adjust the combustion process of the boiler in accordance with the procedures specified in chapter 5, Combustion Efficiency Tables, Taplin, Harry R., Fairmont Press, 1991; and

(2) Maintain, in a permanently bound log book or other format approved by the director, the following information:

a. The date(s) on which:

i. The efficiency test was conducted; and

ii. The combustion process was last adjusted;

b. The name(s), title and affiliation of the person(s) who:

i. Conducted the efficiency test; and

ii. Made the adjustments;

c. The NOx emission rate, in ppm after the adjustments are made;

d. The CO emission rate, in ppm after the adjustments are made;

e. The opacity readings; and

f. Any other information required by Env-A 901.06 and Env-A 901.07.

(c) On or after May 31, 1995 industrial boilers with heat input rates of at least 50,000,000 Btu per hour but less than 100,000,000 Btu per hour shall comply with the NOx RACT emission limits, or install the NOx RACT control technology, specified below:

(1) For dry-bottom boilers firing coal, capable of firing coal, oil or any combination thereof:

a. For tangential-fired boilers, 0.38 lb. per million Btu, based on a 24-hour calendar day average;

b. For face-fired boilers, 0.50 lb. per million Btu, based on a 24-hour calendar day average; and

c. For stoker-fired boilers, 0.30 lb. per million Btu, based on a 24-hour calendar day average;

(2) For tangential or face-fired boilers firing exclusively oil:

a. For boilers firing No. 2 fuel oil, 0.12 lb. per million Btu, based on an hourly average; and

b. For boilers firing No. 4, 5, or 6 fuel oil:

i. 0.30 lb. per million Btu, based on a 24-hour calendar day average;

ii. Install, operate, and maintain low NOx burners (LNB); or

iii. Install, operate and maintain air pollution control equipment or an air pollution control process having equivalent or greater NOx removal efficiency as lox NOx burners (LNB) as approved by the division and EPA.

(3) For tangential or face-fired boilers firing a combination of oil and gas:

a. When firing exclusively gas:

1. 0.10 lb. per million Btu, based on an hourly average;

2. Install, operate, and maintain low NOx burners (LNB); or

3. Install, operate, and maintain air pollution control equipment or an air pollution control process having equivalent or greater NOx removal efficiency as low NOx burners (LNB) as approved by the division and EPA.

b. When firing exclusively oil:

1. When firing No. 2 fuel oil, 0.12 lb. per million Btu, based on an hourly average; and

2. When firing No. 4, 5, or 6 fuel oil:

i. 0.30 lb. per million Btu, based on a 24-hour calendar day average;

ii. Install, operate, and maintain low NOx burners (LNB); or

iii. Install, operate, and maintain air pollution control equipment or an air pollution control process having equivalent or greater NOx removal efficiency as low NOx burners (LNB) as approved by the division and EPA.

c. When firing a combination of oil and gas:

1. When firing gas and No. 2 fuel oil, 0.12 lb. per million Btu, based on an hourly average; and

2. When firing gas and No. 4, 5, or 6 fuel oil:

i. 0.30 lb. per million Btu, based on a 24-hour calendar day average;

ii. Install, operate, and maintain low NOx burners (LNB); or

iii. Install, operate, and maintain air pollution control equipment or an air pollution control process having equivalent or greater NOx removal efficiency as low NOx burners (LNB) as approved by the division and EPA.

(4) For boilers firing exclusively gas:

a. 0.10 lb. per million Btu, based on an hourly average;

b. Install, operate, and maintain low NOx burners (LNB); or

c. Install, operate, and maintain air pollution control equipment or an air pollution control process having equivalent or greater NOx removal efficiency as low NOx burners (LNB) as approved by the division and EPA.

(5) For boilers firing wood fuel, or a combination of wood fuel and oil:

a. For boilers equipped with a traveling, shaker, or vibrating grate, 0.33 lb. per million Btu, based on a 24-hour calendar day average;

and

b. For boilers equipped with a stationary grate, 0.25 lb. per million Btu based on a 24-hour calendar day average.

(d) On or after May 31, 1995 industrial boilers with heat input rates of 100,000,000 Btu per hour or more shall comply with the NOx RACT emission limits, or install the NOx RACT control technology, specified below:

(1) For wet-bottom boilers firing coal, or any combination of fuels utilizing coal:

a. For tangential or face-fired boilers, 1.0 lb. per million Btu, based on a 24-hour calendar day average; and

b. For cyclone-fired boilers, 0.92 lb. per million Btu, based on a 24-hour calendar day average;

(2) For dry-bottom boilers firing coal, capable of firing coal, oil or any combination thereof:

a. For tangential-fired boilers, 0.38 lb. per million Btu, based on a 24-hour calendar day average;

b. For face-fired boilers, 0.50 lb. per million Btu, based on a 24-hour calendar day average; and

c. For stoker-fired boilers, 0.30 lb. per million Btu, based on a 24-hour calendar day average;

(3) For boilers firing oil, capable of firing oil, gas, or any combination thereof:

a. For tangential or face-fired boilers when firing exclusively oil:

1. 0.30 lb. per million Btu, based on a 24-hour calendar day average;

2. Install, operate, and maintain low NOx burners (LNB); or

3. Install, operate, and maintain air pollution control equipment or an air pollution control process having equivalent or greater NOx removal efficiency as low NOx burners (LNB) as approved by the division and EPA.

b. For face-fired boilers when firing gas, or any combination of oil and gas, 0.25 lb. per million Btu based on a 24-hour calendar day

average; and

c. For tangential-fired boilers when firing gas, or any combination of oil and gas, 0.25 lb. per million Btu based on a 24-hour calendar day average;

(4) For boilers firing exclusively gas:

a. For tangential or face-fired boilers, 0.10 lb. per million Btu, based on an hourly average;

b. Install, operate and maintain low NOx burners (LNB); or

c. Install, operate and maintain air pollution control equipment or an air pollution control process having equivalent or greater NOx removal efficiency as low NOx burners (LNB) as approved by the division and EPA.

(5) For boilers firing wood fuel, capable of firing a combination of wood fuel and oil:

a. For boilers equipped with a traveling, shaker, or vibrating grate, 0.33 lb. per million Btu, based on a 24-hour calendar day average; and

b. For boilers equipped with a stationary grate, 0.25 lb. per million Btu, based on a 24-hour calendar day average.

(e) Compliance with the NOx RACT emission standards specified in this section shall be determined by the testing methods specified in Env-A 1211.21 and, if applicable, by a CEM system for NOx required by Env-A 600 or Env-A 1211.22.

(f) The recordkeeping and reporting requirements for industrial boilers shall be in accordance with the provisions of Env-A 901.06 and Env-A 901.07, respectively.

Env-A 1211.06 Emission Standards for Combustion Turbines.

(a) All combustion turbines meeting the applicability criteria of Env-A 1211.02(d) shall be subject to the provisions of this section.

(b) All combustion turbines operating as emergency generators or load shaving units shall be subject to the provisions of Env-A 1211.11 or Env-A 1211.13.

(c) On or after May 31, 1995 combustion turbines shall be limited at all times to hourly average NOx RACT emission limits specified below:

(1) For combined and regenerative cycle combustion turbines:

a. For gas-fired turbines without oil back-up, 42 ppmvd, corrected to 15% O_2 ;

b. For gas-fired turbines with oil back-up, the more stringent of:

1. When operating on gas, 42 ppmvd, corrected to 15% O_2 ; or

2. When operating on oil, 65 ppmvd, corrected to 15% O_2 ;

c. For oil-fired turbines, 65 ppmvd, corrected to 15% O_2 .

(2) For simple cycle combustion turbines:

a. For gas-fired turbines without oil back-up, 55 ppmvd, corrected to 15% O_2 ;

b. For oil-fired turbines, 75 ppmvd, corrected to 15% O_2 , and

c. For gas-fired turbines with oil back-up:

1. When operating on gas, 55 ppmvd, corrected to 15% O_2; and

2. When operating on oil, 75 ppmvd, corrected to 15% O_2.

(e) Compliance with the NOx RACT emission standards specified in this section shall be determined by the testing methods specified in Env-A 1211.21 and, if applicable, by a CEM system for NOx required by Env-A 600 or Env-A 1211.22.

(f) The recordkeeping and reporting requirements for combustion turbines shall be in accordance with the provisions of Env-A 901.06 and Env-A 901.07, respectively.

Env-A 1211.07 Emission Standards for Stationary Internal Combustion Engines.

(a) All stationary internal combustion engines meeting the applicability criteria of Env-A 1211.02(e) shall be subject to the provisions of this section.

(b) All stationary internal combustion engines operating as emergency generators or load shaving units shall be subject to the provisions of Env-A 1211.11 or Env-A 1211.13.

(c) On or after May 31, 1995 stationary internal combustion engines shall be limited at all times to hourly average NOx RACT emission limits no greater than those specified below:

(1) For rich burn internal combustion engines, 1.5 grams per bhp-hr for

gas-fired units.

(2) For lean burn internal combustion engines:

a. For gas-fired units, 2.5 grams per bhp-hr; and

b. For oil-fired units, 8.0 grams per bhp-hr.

(d) Compliance with the NOx RACT emission standards specified in this section shall be determined by the testing methods in Env-A 1211.21 and, if applicable, by a CEM system for NOx required by Env-A 600 or Env-A 1211.22.

(e) The recordkeeping and reporting requirements for stationary internal combustion engines shall be in accordance with the provisions of Env-A 901.06 and Env-A 901.07, respectively.

Env-A 1211.08 Emission Standards for Asphalt Plant Dryers.

(a) For the purpose of this section, the following definitions shall apply:

(1) "Batch type asphalt plant" means an asphalt plant where equipment external to the rotary dryer is used to mix the aggregate and asphalt cement or other binder;

(2) "Drum mix type asphalt plant" means an asphalt plant where the asphalt cement or other binder is added to the aggregate while the aggregate is in the rotary dryer; and

(3) "Rotary dryer" means a cylinder which rotates about a fixed axis and through which hot gases are passed for the purpose of removing moisture from solid material.

(b) All asphalt plant rotary dryers meeting the applicability criteria of Env-A 1211.02(f) shall be subject to the provisions of this section.

(c) On or after May 31, 1995 asphalt plant rotary dryers shall be limited at all times to hourly average NOx RACT emission limits no greater than 0.12 lb. per ton of asphalt produced for batch type and drum mix type asphalt plants.

(d) Compliance with the NOx RACT emission standards specified in this section shall be determined by the testing methods in Env-A 1211.21and, if applicable, by a CEM system for NOx required by Env-A 600 or Env-A 1211.22.

(e) The recordkeeping and reporting requirements for asphalt plant dryers shall be in accordance with the provisions of Env-A 901.06 and Env-A 901.07, respectively.

Env-A 1211.09 Emission Standards for Incinerators.

(a) All incinerators meeting the applicability criteria of Env-A 1211.02(g) shall be subject to the provisions of paragraphs (c) through (e) of this section.

(b) All incinerators combusting sewage sludge shall be subject to the provisions of Env-A 1211.14.

(c) On or after May 31, 1995 incinerators shall be limited at all times to 24-hour calendar day average NOx RACT emission limits no greater than 0.53 lb. per million Btu.

(d) Compliance with the NOx RACT emission standards specified in this section shall be determined by the testing methods in Env-A 1211.21 and, if applicable, by a CEM system for NOx required by Env-A 600 or Env-A 1211.22.

(e) The recordkeeping and reporting requirements for incinerators shall be in accordance with the provisions of Env-A 901.06 and Env-A 901.07, respectively.

Env-A 1211.10 Emission Standards for Wallboard Manufacturing Facilities.

(a) All wallboard dryers, calcining mills, calciners, and gypsum rock dryers meeting the applicability criteria of Env-A 1211.02(h) shall be subject to the provisions of this section.

(b) On or after May 31, 1995 wallboard dryers, calcining mills, calciners, and gypsum rock dryers shall comply with the NOx RACT emission limits, or install the NOx RACT control technology, specified below:

(1) For wallboard dryers, calcining mills, calciners, and gypsum rock dryers firing natural gas:

a. 0.10 lb. per million Btu, based on an hourly average;

b. Install, operate, and maintain low NOx burners (LNB); or

c. Install, operate, and maintain air pollution control equipment or an air pollution control process having equivalent or greater NOx removal efficiency as low NOx burners (LNB) as approved by the division and EPA.

(2) For wallboard dryers, calcining mills, calciners, and gypsum rock dryers firing fuel oil:

a. When firing #2 fuel oil:

1. 0.10 lb. per million Btu, based on an hourly average;

2. Install, operate, and maintain low NOx burners (LNB); or

3. Install, operate, and maintain air pollution control equipment or an air pollution control process having equivalent or greater NOx removal efficiency as low NOx burners (LNB) as approved by the division and EPA.

b. When firing #4, #5, or #6 fuel oil:

1. 0.30 lb. per million Btu, based on a 24- hour calendar day average;

2. Install, operate, and maintain low NOx burners (LNB); or

3. Install, operate, and maintain air pollution control equipment or an air pollution control process having equivalent or greater NOx removal efficiency as low NOx burners (LNB) as approved by the division and EPA.

(c) Compliance with the NOx RACT emission standards specified in this section shall be determined by the testing methods in Env-A 1211.21 and, if applicable, by a CEM system for NOx required by Env-A 600 or Env-A 1211.22.

(d) The recordkeeping and reporting requirements for wallboard manufacturing facilities shall be in accordance with the provisions of Env-A 901.06 and Env-A 901.07, respectively.

Env-A 1211.11 Emission Standards and Control Options for Emergency Generators.

(a) Owners or operators of emergency generators meeting the applicability criteria of Env-A 1211.02(i) shall be subject to the provisions of this section.

(b) Each emergency generator subject to the provisions of this section shall be limited to less than 500 hours of operation per year during any consecutive 12-month period by an enforceable permit issued by the division.

(c) On or after May 31, 1995 stationary combustion turbines operating as emergency generators shall:

(1) Annually adjust the combustion process of the combustion turbine, before April 1st of each year, in accordance with the following:

a. Inspect the burner, the flame pattern from the burner, and the systems which control the air-to-fuel ratio;

b. Adjust the air-to-fuel ratio in accordance with the results of the inspections performed;

c. Determine the effect of the adjustment upon NOx emissions;

d. Re-adjust the air-to-fuel ratio based on results of the previous adjustment performed to minimize total NOx emissions; and

e. Confirm that NOx emissions from the equipment or source operation do not cause an exceedance of any maximum allowable emission rate for NOx or any other state and federally regulated air pollutant, or any opacity standard specified in Env-A 1202;

(2) Maintain, in a permanently bound log book or other format approved by the director, the following information:

a. The date on which the combustion process was last adjusted;

b. The name, title, and affiliation of the person who made the adjustments;

c. The NOx emission rate, in ppm after the adjustments are made;

d. The CO emission rate, in ppm after the adjustments are made;

e. The opacity readings; and

f. Any other information required by Env-A 901.06 and Env-A 901.07.

(3) Install, operate, and maintain an elapsed time meter for each engine to indicate, in cumulative hours, the elapsed engine operating time for the previous 12 months;

(4) Determine the hours of operation for each engine for the previous 12-month period on a monthly basis; and

(5) Notify the division in writing in the event that the hours of operation exceed 500 hours for any consecutive 12-month period.

(d) On or after May 31, 1995 stationary internal combustion engines operating as emergency generators shall at all times:

(1) Set and maintain the ignition timing of the engine four degrees retarded relative to standard timing, provided that the ignition timing shall not be retarded beyond the point that:

a. The CO emission concentration increases beyond 100 pmvd, corrected to 15% oxygen; or

b. The turbocharger speed is increased beyond the maximum operating speed recommended by the manufacturer; or

c. The exhaust port temperature increases beyond the manufacturer's recommended maximum operating temperature; or

d. The opacity of the emissions from the engine exhaust is equal to or greater than 20% opacity;

(2) Install, operate, and maintain an elapsed time meter for each engine to indicate, in cumulative hours, the elapsed engine operating time for the previous 12 months;

(3) Determine the hours of operation for each engine for the previous 12-month period on a monthly basis;

(4) Maintain records to certify that the ignition timing of the engine has been inspected and adjusted at least once every 3 years; and

(5) Notify the division in writing in the event that the hours of operation exceed 500 hours for any consecutive 12-month period.

(e) If the hours of operation of any emergency generator exceed 500 hours for any consecutive 12-month period, the emergency generator shall immediately become subject to the requirements of Env-A 1211.06 or Env-A 1211.07 for the appropriate device type and fuel type.

(f) The emissions from emergency generators shall be included in the calculation of both the actual and theoretical potential emissions from a stationary source.

(g) Compliance with the NOx RACT emission standards specified in this section shall be determined by the testing methods in Env-A 1211.21 and, if applicable, by a CEM system for NOx required by Env-A 600 or Env-A 1211.22.

(h) The recordkeeping and reporting requirements for emergency generators shall be in accordance with the provisions of Env-A 901.06 and Env-A 901.07, respectively.

Env-A 1211.12 Emission Standards for Auxiliary Boilers.

(a) All auxiliary boilers meeting the applicability criteria of Env-A 1211.02(j) shall be subject to the provisions of this section.

(b) On or after May 31, 1995 auxiliary boilers shall be limited at all times to NOx RACT emission limits no greater than 0.20 lb. per million Btu based on a 24-hour calendar day average, regardless of the type of fuel burned.

(c) If the actual NOx emissions from any auxiliary boiler exceed 50 tons during any consecutive 12-month period, the auxiliary boiler shall immediately become subject to the requirements of Env-A 1211.05 for the appropriate boiler type and fuel type.

(d) The emissions from all auxiliary boilers shall be included in the calculation of both the actual and theoretical potential emissions from the stationary source.

(e) Compliance with the NOx RACT emission standards specified in this section shall be determined by the testing methods in Env-A 1211.21 and, if applicable, by a CEM system for NOx required by Env-A 600 or Env-A 1211.22.

(f) The recordkeeping and reporting requirements for auxiliary boilers shall be in accordance with the provisions of Env-A 901.06 and Env-A 901.07, respectively.

Env-A 1211.13 Emission Standards for Load Shaving Units.

(a) All load shaving units meeting the applicability criteria of Env-A 1211.02(k) shall be subject to the provisions of this section.

(b) On or after May 31, 1995 stationary combustion turbines operating as load shaving units shall be limited at all times to NOx RACT emission limits no greater than 0.90 lb. per million Btu heat input based on an hourly average for any type of fuel.

(c) On or after May 31, 1995 stationary internal combustion engines operating as load shaving units shall be limited at all times to hourly average NOx RACT emission limits specified below:

(1) For rich burn internal combustion engines, 2.0 grams per bhp-hr for gas-fired units; and

(2) For lean burn internal combustion engines:

a. For gas-fired units, 3.0 grams per bhp-hr; and

b. For oil-fired units, 9.0 grams per bhp-hr.

(d) If the actual NOx emissions from any load shaving unit exceed 50 tons during any consecutive 12-month period, the load shaving unit shall immediately become subject to the requirements of Env-A 1211.06 or Env-A 1211.07 for the appropriate device type and fuel type.

(e) The emissions from all load shaving units shall be included in the calculation of both the actual and theoretical potential emissions from the stationary source.

(f) Compliance with the NOx RACT emission standards specified in this section shall be determined by the testing methods in Env-A 1211.21and, if applicable, by a CEM system for NOx required by Env-A 600 or Env-A 1211.22.

(g) The recordkeeping and reporting requirements for load shaving units shall be in accordance with the provisions of Env-A 901.06 and Env-A 901.07, respectively.

Env-A 1211.14 Emission Standards and Control Options for Miscellaneous Stationary Sources. Owners or operators of miscellaneous stationary sources meeting the applicability criteria of Env-A 1211.02(l) shall:

(a) Initiate and implement a study of RACT control options consisting of a detailed examination of technological and economic feasibility of available NOx control techniques for all classifiable and unclassifiable NOx-emitting sources, devices or processes; and

(b) Apply for and obtain from the division a RACT order in accordance with the provisions of Env-A 1211.19.

Env-A 1211.15 Phase II NOx Emission Limits. Unless EPA approves an attainment demonstration for New Hampshire based on Urban Airshed Modelling for New Hampshire's ozone nonattainment areas that does not require additional NOx emission reductions for New Hampshire to attain the NAAQS for ozone, the director shall establish and implement Phase II NOx emission limits for all applicable devices and processes listed in Env-A 1211.02(a) through (k) no later than May 31, 1999, except as provided for in Env-A 1211.03(f).

Env-A 1211.16 Compliance Schedule.

(a) Owner or operator of sources, devices or processes subject to the provisions of this part shall install RACT as expeditiously as possible but not later than May 31, 1995, except as provided for in Env-1211.02(1).

(b) Owner or operator of sources, devices or processes subject to the requirements of this part shall develop, and submit to the division within 120 days of the effective date of this part, a schedule for bringing the affected process into compliance with the applicable provisions. The compliance schedule shall indicate the method by which compliance shall be achieved and the commitment dates for the major increments of progress toward compliance, including:

(1) Completion of engineering;

(2) Submission of air pollution permit application;

(3) Awarding of contract;

(4) Initiation of construction;

(5) Completion of construction;

(6) Initial compliance testing;

(7) Submission of compliance tests reports; and

(8) Final compliance with emission or control requirements of this part.

(c) For sources seeking to limit its emissions through an enforceable permit under Env-A 1211.02(m), the compliance schedule required by Env-A 1211.13(b), above, shall include the following:

(1) The actual amount of NOx emitted from each affected source or device for each calendar year since January 1, 1989;

(2) The permit application as required by Env-A 603.02(n), including a description of the design and operation of the affected source or device; and

(3) Any other information required by part Env-A 605.

(d) The division shall approve each compliance schedule or request additional information, as necessary, within 60 days of receipt.

(e) In the event that additional information is necessary, the owner or operators of the source, device or process shall submit such additional information to the division in writing within 30 days of receiving a request from the division.

(f) The division shall evaluate all compliance schedules and approve only those schedules which meet the requirements of this part as expeditiously as possible and contain a final compliance date not later than May 31, 1995.

Env-A 1211.17 Alternative RACT Emission Limits.

(a) Alternative RACT emission limits, other than those specified in Env-A 1211.03 through Env-A 1211.13, shall be allowable for all NOx emitting processes and devices regulated under this part, except for wet-bottom cyclone fired utility boilers subject to the RACT emission limits and/or technology requirements specified in Env-A 1211.03(d), provided that the source owner or operator performs an alternative RACT analysis that conclusively demonstrates, in accordance with the provisions of (b) and (c), below, that the NOx RACT emission limit(s) specified or the NOx RACT air pollution control technology in Env-A 1211.03 through Env-A 1211.13 is not reasonably available considering technological and economical feasibility.

(b) An owner or operator of a stationary source seeking alternative NOx RACT emission limits shall:

(1) Undertake and submit to the division, within 120 days of the effective date of this part, a study of RACT control options consisting of a detailed examination of the technological and economic feasibility of all available NOx control techniques for all applicable NOx emitting sources, devices or processes for which alternative RACT emission limits are sought;

(2) Obtain a RACT order from the division in accordance with the provisions of this section.

(c) Owners and operators of a utility boiler operating as a stationary source seeking alternative NOx RACT emission limits shall:

(1) Undertake and submit to the division within 120 days of the effective date of this part, a study of RACT control options consisting of a detailed examination of the technological and economic feasibility of available NOx control techniques for all applicable NOx-emitting sources, devices or processes for which alternative RACT emission limits are sought. This study shall include, but not be limited to, an evaluation of the technical and economic feasibility of the following NOx control options:

a. Low-NOx burners;

b. Overfire air;

c. Flue gas recirculation;

d. Natural gas reburn;

e. Burners out of service;

f. Use of alternative fuels;

g. Selective catalytic reduction; and

h. Selective non-catalytic reduction; and

(2) Obtain a RACT order from the division in accordance with the provisions of this section.

Env-A 1211.18 Multiple Sources Under Common Ownership.

(a) For the purposes of this section, "bubble" means an option taken by the source to impose controls that are more stringent than RACT level on certain emitting units while simultaneously imposing controls that are less stringent than RACT level on other emitting units, including the option of no controls on such units, in order to achieve the same amount of emission reduction required by the SIP in a more cost effective manner for the source.

(b) Emissions averaging shall be allowed for NOx emissions from 2 or more stationary sources subject to the provisions of this section.

(c) All stationary sources to be included in the emissions averaging shall be:

(1) Located in New Hampshire; and

(2) Under the control of a single owner.

(d) Compliance with the NOx RACT weighted average allowable emission rate as calculated in Env-A 1211.18(i) shall be based on the weighted average actual NOx emissions from the units that are operating on a given day.

(e) Emissions averaging, including allowable emission averaging periods, shall be done in accordance with the provisions of EPA's emissions trading policy, as described in 51 FR 43814 and 51 FR 43850.

(f) Emission reduction credits generated for the purpose of emission averaging shall be real, surplus, permanent, quantifiable, federally enforceable and transferable within the bubble on an annual bases, i.e., within a given calendar year, and shall conform to the provisions set forth in 40 CFR 51.165, as revised June 28, 1989, and RSA 125-J and any administrative rules promulgated thereunder.

(g) Emissions averaging shall be enforced by means of federally enforceable conditions contained in permits issued by the division as a source-specific SIP revision, or federally enforceable permits issued by the division or EPA, for all stationary sources to be included in the averaging.

(h) The recordkeeping and reporting requirements for emission averaging shall be in accordance with the provisions of Env-A 901.06 and Env-A 901.07, respectively. In any event recordkeeping and reporting shall include a summary of the emissions, the emissions reduction credit transfers, the applicable transfer ratios, and the adjusted emissions, after transfer, of each affected stationary source.

(i) In addition to the requirements of part Env-A 607, all stationary sources to be included in the emissions averaging shall comply with the following equation for each 24-hour calendar day:

$$E = (A1 \times B1) + (A2 \times B2) + ... + (An \times Bn)$$

Where: "E" = the total allowable emissions from all facilities included in the emissions averaging in pounds per day;

"A1, A2,..., An" = the applicable emission limit for each unit of production,, i.e., lb/MMBtu, as specified in this part;

"B1, B2,..., Bn" = the maximum number of units of production per day, i.e., MMBtu/day, based on the maximum gross heat input rate of each device included in the emissions averaging.

(j) Emission reduction credits generated from reductions at any stationary source included in emissions averaging can be used for compliance with Env-A

1211.18(i), above, by other stationary source(s) within the bubble. However, at those sources located in nonattainment areas, 1.2 units of credits shall be necessary to offset 1.0 unit of emissions.

(k) All stationary sources or devices to be included in the emissions averaging shall:

(1) Calculate daily emissions:

a. For those sources or devices generating credits for the purpose of emissions averaging, based on the installation of CEMs in accordance with the provisions of Env-A 1211.22 and Env-A 805; or

b. For those sources or devices not required to install CEMs under the provisions of Env-A 1211.22 or Env-A 805, based on:

1. The worst case emission rate(s) for the device(s) or source(s) established through stack testing performed in accordance with the provisions of Env-A 1211.21 and approved by the division and EPA; and

2. The hours of operation measured in accordance with a method approved by EPA; and

(2) Comply with the recordkeeping and reporting requirements specified in Env-A 901.06 and Env-A 901.07.

Env-A 1211.19 Procedure for Issuance of a RACT Order.

(a) For the purpose of this section, the following definitions shall apply:

(1) "Determination of insufficiency" means a written determination by the division that the documentation submitted by a source applicant, pursuant to the requirement for a feasibility study of RACT options as required by Env-A 1211.17(b) and (c), is inadequate for the division to issue a RACT order; and

(2) "Determination of sufficiency" means a written determination by the division that the documentation submitted by a source applicant, pursuant to the requirement for a feasibility study of RACT options as required by Env-A 1211.17(b) and (c), is adequate for the division to issue a RACT order.

(b) The owner or operator of any miscellaneous stationary source subject to the provisions of Env-1211.14 or any source, device or process seeking alternative RACT emission limits under Env-A 1211.17 shall submit the following to the division within 120 days of the effective date of this part:

(1) An inventory of all NOx-emitting sources, devices or processes at the facility;

(2) The maximum NOx-emitting capacity of each NOx-emitting source, device or process;

(3) The actual amount of NOx emitted based on heat input, fuel consumption or equivalent method acceptable to the division, for each day during the calendar year 1990, from each affected NOx-emitting source, device or process at the facility;

(4) A detailed study of RACT options;

(5) An examination of the technical and economical feasibility of available NOx control techniques for all NOx-emitting sources, devices or processes;

(6) An examination of the feasibility of changing to low-NOx emitting processes;

(7) The control option selected, stating emission limits, monitoring, recordkeeping and reporting procedures, and test methods to demonstrate compliance;

(8) The amount of NOx that is proposed to be controlled from each NOx-emitting source, device or process identified in the inventory required by Env-A 1211.19(b)(1); and

(9) A schedule for implementation containing the elements described in Env-A 1211.16(b) and a demonstration of compliance consistent with the requirements of this part.

(c) For miscellaneous stationary sources subject to the provisions of Env-1211.14 or sources, devices or processes seeking alternative RACT emission limits in accordance with the provisions of Env-A 1211.17, the division shall:

(1) Issue written notification of its determination to the owner or operator of the source or device within 60 days of receipt of documentation submitted pursuant to Env-A 1211.17(b) or (c), and Env-A 1211.19(d) containing either:

a. An initial determination of sufficiency; or

b. An initial determination of insufficiency, together with a request for all additional information necessary to issue an alternative RACT determination;

(2) In the event that an initial determination of sufficiency is made, issue a final determination of sufficiency and present to EPA and the owner or operator of the affected source, device, or process a proposed RACT order within 60 days of the initial determination of sufficiency, containing:

a. An inventory of all NOx-emitting sources, devices, or processes;

b. Emission limits for all NOx-emitting sources, devices, or processes;

c. A schedule requiring compliance with the RACT emission limits that contains the elements described in Env-A 1211.16(b);

d. Procedures for determining initial compliance with the emission limits;

e. Procedures for assessing continuous compliance with the emission limits; and

f. Recordkeeping and reporting requirements in accordance with the provisions of Env-A 901.06 and Env-A 901.07, respectively;

(3) In the event that an initial determination of insufficiency is made:

a. Issue a final determination of sufficiency and present to EPA and the owner or operator of the affected source, device, or process a proposed RACT order containing those items listed in Env-A 1211.19(c)(2) within 60 days of the receipt of those items submitted pursuant to Env-A 1211.19(c)(1)b., or

b. Terminate the permit process and issue a final determination of insufficiency if a complete response to the initial determination of insufficiency is not received from the owner or operator of the affected source, device or process within 60 days of receipt of notification of the division's initial determination of insufficiency;

(4) Within 30 days of the issuance of a proposed RACT order, issue a public notice of an oral hearing on a proposed RACT order, once in a newspaper of daily statewide circulation and once in a newspaper in the general locality of the affected source;

(5) Conduct an oral hearing on the proposed RACT order not less than 30 days after the issuance of the public notice;

(6) Issue a final RACT order to the owner or operator of the affected source, device, or process within 60 days of the date of the public hearing on the proposed RACT order;

(7) Submit to EPA a revision to the State Implementation Plan (SIP) within 60 days of the issuance of a final RACT order; and

(8) Upon issuance of the final RACT order, issue a permit to the owner or operator of the affected source, device, or process which incorporates all of the terms and conditions of the final RACT order.

(d) The owner or operator of any source, device, or process for which a final RACT order has been issued shall comply with all of the terms and conditions of the final RACT order immediately upon the issuance of such order by the division.

Env-A 1211.19 Seasonal Control of NOx Emissions. A device or stationary source subject to this part may utilize seasonal emission control techniques in order to comply with NOx RACT, subject to the following conditions:

(a) Any device or stationary source using post-combustion NOx air pollution control equipment to comply with NOx RACT during the ozone season shall continue operation of said equipment during the remainder of the calendar year;

(b) The allowable annual mass NOx emission rate, in tons per year, must be less than or equal to the annual NOx mass emission rate that would be calculated by multiplying the actual annual production rate, for example Btu per year, by the applicable emission limit, for example lbs. NOx per million Btu, specified in Env-A 1211.03 through Env-A 1211.13. The applicable emission limit shall be the limit which would apply considering all fuels in use prior to December 31, 1990;

(c) Annual NOx emissions limits shall be based on the lower of the actual or allowable NOx emissions for calendar year 1990, unless NOx emissions and operational data are submitted to and approved by the division demonstrating that NOx emissions from the source for calendar year 1990 are not representative of normal operations. In no case shall NOx emissions data for years prior to calendar year 1989 be used to represent normal operations for the purpose of emissions averaging. The division shall use EPA approved methods and procedures for determining whether the data submitted is adequate to demonstrate that NOx emissions for calendar year 1990 are not representative of normal operations;

(d) Emissions averaging to meet NOx RACT requirements on a seasonal basis shall be allowable in accordance with the following requirements:

(1) A 24-hour calendar day average NOx mass emission limit shall be established for the ozone season based on the applicable limit specified in Env-A 1211.03 through Env-A 1211.13, considering all fuels in use prior to December 31, 1992;

(2) A 24-hour calendar day average NOx mass emission limit shall be established for the remainder of the year based on the uncontrolled emission rate of the device determined by CEM data or stack test data;

(3) An allowable average annual NOx RACT mass emission limit shall be established based on the criteria specified in Env-A 1211.20(b);

(4) The sum of the NOx mass emissions during the ozone season and the NOx mass emissions during the remainder of the calendar year shall be less than or equal to the lesser of the annual NOx RACT mass emissions that would have been allowed under Env-A 1211.03 through Env-A 1211.13 or the annual NOx mass emissions allowed under the requirements of Env-A 100 through Env-A 1300;

(5) Emissions from replacement power sources shall be calculated by multiplying the actual production rate for the device, for example Btu per hour, by the allowable NOx mass emission rate for the device, for example lb. NOx per million Btu;

(6) For multiple sources under common ownership using the bubble specified in Env-A 1211.18, the applicable emission limit for each unit of production referred to in the formula in Env-A 1211.18(i) shall be established by the division in accordance with the applicable provisions of this section; and

(7) All stationary sources using seasonal controls shall:

a. Install CEMs to the extent required by Env-A 1211.22 and Env-A 805;

b. Calculate daily emissions in accordance with the provisions of Env-A 1211.22 and part Env-A 805;

c. Calculate annual emissions in accordance with the provisions of this section; and

d. Comply with the recordkeeping and reporting requirements specified in Env-A 901.06 and Env-A 901.07.

Env-A 1211.21 NOx Testing.

(a) All stationary sources subject to the requirements of this part shall conduct an initial compliance stack test, no later than August 31, 1995, to demonstrate compliance with the NOx RACT emission limits or NOx RACT air pollution control technology requirements specified in Env-A 1211.03 through Env-A 1211.13.

(b) All stationary sources subject to the requirements of this part shall conduct periodic stack testing, no less frequently than once every 3 years. in order to demonstrate compliance with the NOx RACT emission limits or NOx RACT air pollution control technology requirements specified in Env-A 1211.03 through Env-A 1211.13, the first of which shall occur no later than 3 years from the date of the initial compliance stack test required by Env-A 1211.21(a).

(c) The owner or operator of a stationary source or device required to conduct an initial compliance stack test or periodic stack testing shall submit a stack test report to the division within 30 days of the date of such stack test.

(d) For stationary sources, including utility boilers, industrial boilers, municipal waste incinerators and stationary diesel engines, the following test methods shall be used:

(1) Method 7, 7A, 7C, 7D or 7E, 40 CFR Part 60, Appendix A to determine NOx concentrations in stack gases from applicable stationary sources.

(2) Method 1, or 2, 40 CFR Part 60, Appendix A to determine the exit velocity of stack gases from applicable stationary sources.

(3) Method 3 or 3A, 40 CFR Part 60, Appendix A to determine carbon dioxide, oxygen, excess air and molecular weight (dry basis) of stack gases from applicable stationary sources.

(4) Method 4, 40 CFR Part 60, Appendix A to determine moisture content (volume fraction of water vapor) of stack gases from applicable stationary sources.

(e) Method 20, 40 CFR Part 60, Appendix A may be used as an alternative test method in lieu of the methods identified in Env-A 1211.21(d), above, to determine NOx concentrations in stationary gas turbine stack gases.

(f) Stationary sources subject to this part shall also comply with the testing requirements specified in Env-A 800.

Env-A 1211.22 NOx Monitoring Requirements. The division shall require installation, operation, maintenance, and quality assurance testing of a CEM system for NOx which meets all of the requirements specified in Env-A 805 if any of the following conditions exist:

(a) A source utilizes air pollution control equipment in order to maintain compliance with a NOx emission limit and continuous emission monitoring is determined by the division to be necessary to ensure that this emission limit is not exceeded and that the control equipment is performing correctly;

(b) A utility boiler that operates as a stationary source;

(c) Any stationary source subject to the CEM provisions of Env-A 805.02;

(d) Any stationary source or device generating emissions credits for the purpose of emission averaging pursuant to Env-A 1211.18.

(e) Any device or stationary source utilizing seasonal emission control techniques, in accordance with Env-A 1211.21, in order to comply with NOx RACT.